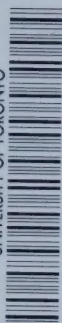


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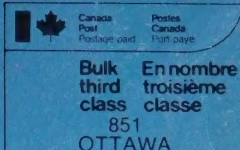
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Editorial

- 403** Dr. Robert Hicks, chairman of CDA's taxation committee, outlines action taken on behalf of the membership regarding imposition of duties on dental materials. Dr. Hicks reviews the situation and comments on government policy, which he says is "inconsistent."

Letters

- 409** Drs. Christopher Clark and Paul Lang respond to a letter critical of their article "Analyzing Selected Criticisms of water fluoridation." The letter prompting their response appeared in the June issue of the Journal, and the article referred to was an insert in the March issue.

The Canadian Medical Association has given strong support to CDA's position on fluoridation and CMA president Dr. W.D.S. Thomas calls for "increased awareness."

In the News

- 410** **Brief on tariffs presented**
Dr. Robert Hick's oral presentation to the Standing Senate Committee on Banking, Trade and Commerce is presented.

- 411** **Priorities workshop**
A further outline of recommendations made at the recent Priorities workshop, and action to date.

- 417** **Retail dentistry**
Dr. Howie Rocket believes retail dentistry is a viable alternate delivery system, and in a lengthy interview with the Journal, gives a detailed picture of the way his particular practice operates. Dr. Rocket hopes to improve the oral health of the 50 per cent of the population he says never sees a dentist.

- 424** **ODA meeting**
Dr. Robert Schiewe was recently installed as president of the Ontario Dental Association, and is concerned that the profession "manage" change rather than "scramble to cope" with it.

- 425** Dr. Gilbert Utas addressed the ODA meeting, and urged active participation in the pro-fluoridation campaign. Dr. Utas also provided details of CDA's current activities.

- 426** Dentists and their assistants should be more aware of the workings of dental x-ray machines. Dr. Ross Barlow of Hamilton, Ont. said dentists can put concerns of patients "in perspective."

- 440** **Convention**
The RCDC symposium on Dentistry for the Disabled is detailed, and information on spouses' programs and the scientific sessions is provided.

Scientific

- 446** **Fluoride content of surface enamel of Eskimo teeth**
— Curzon, Baer and Levesque

- 449** **Periodontosis Part III: Barbados Study**
— Harvey, Jones, Chan, de Vries and Wilika

- 459** **Choice of toothbrushes by patients: A pilot study**
— Yule and Roydhouse

- 462** **Gingival ulceration due to improper toothbrushing**
— Blasberg, Jordan-Knox and Conklin

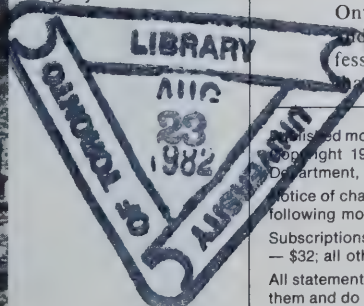
Publications

- 437** **Restorative Dental Materials**
"The rapid advance of all phases of dentistry over the last 20 years makes it imperative that we all think like students."

Immunology of Oral Diseases

This textbook, despite some criticisms "will be extremely useful to undergraduate and graduate dental students."

- 466** Announcements
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Journal

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Editorial

- 404 Le Dr Roberts Hicks, président du Comité des questions fiscales de l'ADC, fait état des interventions qui ont été faites au nom des membres pour s'opposer à l'imposition de droits de douane sur le matériel dentaire. Après avoir passé la situation en revue, il juge "injustifiable" l'attitude du gouvernement.

Lettres

- 409 Les Drs Christopher Clark et Paul Lang répondent à la critique de leur article intitulé "La fluoruration de l'eau: analyse de certaines critiques". L'article en question avait été inséré dans le numéro de mars du Journal et la lettre qui suscite leur réplique a paru dans le numéro de juin.

- 430 L'Association médicale canadienne accorde tout son appui à l'ADC en matière de fluoruration et le président de cette association, le Dr W.D.S. Thomas, réclame une "plus grande sensibilisation" à la question.

Actualités

- 428 **Mémoire sur les tarifs**
Texte de l'exposé du Dr Robert Hicks devant le Comité sénatorial permanent de la banque et du commerce.
- 429 **La conférence sur les questions prioritaires**
Un exposé des mesures prises pour assurer le suivi de la récente conférence sur les questions prioritaires en regard des recommandations qui y ont été faites.
- 431 **La "boutique" du dentiste**
Le Dr Howie Rocket croit en la "boutique" du dentiste comme mode rentable de prestation des services. Il en décrit tout le fonctionnement dans une longue entrevue au Journal. Le Dr Rocket espère ainsi améliorer la santé buccale de la moitié de la population qui, dit-il, ne voit jamais le dentiste.

Au congrès de l'ODA

- 434 Le Dr Robert Schiewe, nouveau président de l'Ontario Dental Association, a incité la profession dentaire à "diriger le changement", plutôt que de tenter de s'y adapter après coup.

- 435 S'adressant au même auditoire, le Dr Gilbert Utas a demandé aux dentistes de participer activement à la campagne en faveur de la fluoruration, tout en informant ses auditeurs des activités courantes de l'ADC.

- 436 Devant une salle comble, le Dr Ross Barlow, de Hamilton (Ont.), a incité les dentistes et leur personnel à toujours mieux connaître le fonctionnement de leurs appareils de radiographie, de façon à mieux situer les craintes de leurs patients.

- 442 **Le congrès**
Un aperçu du symposium du CRDC sur les soins dentaires aux handicapés, ainsi que d'autres renseignements sur le programme des épouses et le programme scientifique.

Publications

- 437 **Restorative Dental Materials**
"La dentisterie, sous tous ses aspects, a progressé si rapidement au cours des vingt dernières années qu'il nous faut pratiquement retourner aux études."

Immunology of Oral Diseases

Malgré certaines critiques, ce manuel sera très utile aux étudiants dentaires, diplômés ou non.

Scientifique

- 446 **Le contenu en fluor de l'émail des dents chez les Esquimaux**
— Curzon, Baer et Lévesque.
- 449 **La parodontose, III^e partie: l'étude de la Barbade**
— Harvey, Jones, Chan, de Uries et Wilika.
- 459 **Le choix des brosses à dents chez les patients: une étude pilote**
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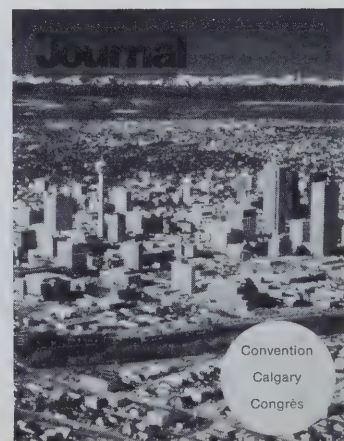
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La direction du Journal ne partage pas nécessairement les opinions qu'expriment ses collaborateurs à moins que l'Association Dentaire Canadienne ne les ait adoptées officiellement.

G^OVERNMENT ACTION INCONSISTENT

In November, 1980, the CDA taxation committee became aware that the government intended to reintroduce duty application on all imported dental materials used in dental "reconstructive surgery" (i.e. dental restorations). Following an information letter from the president of CDA, many dentists in Canada wrote letters to their Member of Parliament or to the minister of finance expressing their concerns over the added cost to dental care in Canada as a result of these duties.

As a result of these letters, the Opposition party prepared an amendment to Bill C-50 which would return dental materials to their duty-free status. Unfortunately, the government defeated this motion, passed Bill C-50, and the duty-free status of dental materials ended.

The Bill has been referred to the Standing Senate Committee on Banking, Trade and Commerce prior to consideration and approval by the Senate. The CDA taxation committee continued in its efforts to have the dental profession's position heard by presenting a brief to the Senate Committee June 9, 1981. (A summary of this brief is printed in this edition on page 412.

Through discussion and correspondence with senior officials of the department of finance — tariffs division — the rationale behind the department's support of the application of duties on imported dental materials was determined. It is to encourage and support manufacture of dental materials in Canada. The department said the only company requesting such tariff protection is Johnson and Johnson which manufactures one brand of dental amalgam (protected by U.S. and Canadian patents) in Canada. CDA has asked the question "is the application of duty on ALL imported dental materials justifiable when less than 10 jobs are created in Canada?", as in the case of Johnson and Johnson. Since a large amount of dental materials are imported, a considerable amount of revenue is collected by the department of finance and only a few jobs are created within the Canadian economy.

A brief look at the history of imposition of duty on imported dental materials is helpful in the appreciation of the issue.

In 1963, the tariff item 47810-1 was created and the department of finance started collecting duty on imported dental materials. In 1979, the tariff board considered an appeal on this tariff item and ruled that dental materials were and now are included in the tariff-free status of 47810-1. In effect, this decision said that the department of finance had collected, in error, duty on imported dental

materials under item 47810-1 since 1963. The tariff board decision established the interpretation of the law since 1963, but the department of finance saw fit to advise the minister of state — finance to support legislation that would change the law to fit the department's interpretation.

The issue is complex but the principle is simple — there is no justification for the reasoning that duty on imported materials will encourage or create significant jobs in the dental material manufacturing industry in Canada.

Another issue that has been singled out in this debate is the fact that dental use of materials in reconstructive surgery has been discriminated against when related to the medical use of materials in reconstructive surgery. In my opinion, this issue has been supported in favor of dentists by the Senate Committee, while it has not been accepted by the department of finance or the minister of state — finance.

The application of duty on imported dental materials will increase the cost of dental care to Canadians. This cost increase is significant when one considers the increased costs per restoration for each tooth in a dental patient. However, when all of these "insignificant" costs are added up, a significant increase in dental health care costs is realized. The application of duty on imported dental materials is not consistent with government policy, and Canadian Dental Association support, of containment of rising health care costs. The present government action is inconsistent with long-standing policy making dental equipment, instruments, etc. free from taxation via customs tariff and the Excise Tax Act.

The issue of imposition of duty on imported dental materials by the federal government has been addressed and opposed by the Canadian Dental Association. More importantly, the individual members of CDA have taken time to write to their elected officials to express their views on this issue.

This individual response by the dentists of Canada resulted in an amendment motion to Bill C-50 on the floor of the House of Commons. The taxation committee of your association is appreciative of your response. Without individual help, no association or committee can be truly effective in dealing with national issues of this magnitude.

*Robert Hicks, DDS, MS.
Chairman, Taxation Committee*

UNE MESURE INJUSTIFIABLE

En novembre 1980, le Comité des questions fiscales de l'ADC apprenait que le gouvernement avait l'intention de rétablir les droits de douane sur l'importation de tout le matériel dentaire servant à la "chirurgie restauratrice", c'est-à-dire la chirurgie dentaire. Le président de l'Association en informa alors les membres et un grand nombre de dentistes canadiens écrivirent à leur député et au ministre des finances, leur exprimant leur crainte de voir, en conséquence, hausser le coût des soins dentaires au Canada.

Cette correspondance a incité l'Opposition parlementaire à préparer un amendement au projet de loi C-50, qui aurait pour effet d'empêcher l'imposition des droits sur le matériel en question. Malheureusement, le gouvernement a repoussé la motion et adopté la mesure qui mettait fin à la franchise sur le matériel dentaire.

Le projet gouvernemental a ensuite été présenté au Comité permanent du Sénat de la banque et du commerce avant d'être soumis à l'approbation du Sénat. C'est devant ce comité sénatorial que le comité des questions fiscales de l'ADC s'est présenté, le 9 juin 1981, poursuivant ses efforts pour faire entendre la voix de la profession dentaire. (On trouvera à la page 430 un résumé du mémoire qui a été présenté à cette occasion.)

Nos entretiens et la correspondance que nous avons eue avec les hauts fonctionnaires du ministère des finances (division des tarifs douaniers) nous ont permis de connaître les raisons qu'invoque le ministère à l'appui d'une telle mesure. Il s'agit, dit-on, d'encourager la fabrication du matériel dentaire au Canada. Le ministère a aussi reconnu qu'une seule société avait demandé cette protection tarifaire: la société Johnson and Johnson qui fabrique un amalgame spécial d'obturation (breveté au Canada et aux Etats-Unis). L'ADC a alors demandé si "la création de moins de 10 emplois au Canada, comme c'est le cas chez Johnson and Johnson, peut justifier l'imposition de droits sur TOUTES les importations de matériel dentaire". Vu l'importance de ces importations, le ministère des finances en retirera des revenus considérables pour finalement n'ajouter que quelques nouveaux emplois à l'économie canadienne.

Pour mieux y voir, jetons un coup d'oeil sur le passé.

L'article 47810-1 des tarifs douaniers a été établi en 1963 et, par la suite, le ministère des finances s'est mis à imposer des droits sur l'importation de matériel dentaire. Dans une décision en appel qu'elle a rendue en 1979, la Commission du tarif a statué que l'article en question avait toujours accordé une franchise à l'importation du matériel dentaire et que rien n'avait changé depuis 1963. La décision précisait que, pendant tout ce temps, le ministère des

finances avait fait erreur en percevant des droits sur l'importation du matériel dentaire en vertu de l'article 47810-1. La Commission établissait ainsi l'interprétation qu'il fallait donner à la loi de 1963. Le ministère des finances cependant a jugé à propos de conseiller au ministre d'Etat aux finances de parrainer une nouvelle législation pour modifier la loi dans le sens de sa propre interprétation.

La question est complexe mais le principe est simple: il n'y a aucun fondement à l'argument voulant que l'imposition de droits sur l'importation du matériel dentaire encouragera la création d'un nombre important d'emplois dans l'industrie de la fabrication du matériel dentaire au Canada.

Une autre question est ressortie du débat. C'est la distinction injustifiée que le gouvernement fait, en matière de chirurgie restauratrice, entre le matériel utilisé à des fins médicales et celui utilisé à des fins dentaires, et ceci au détriment de la chirurgie dentaire. A mon avis, le comité sénatorial soutient le point de vue des dentistes à ce sujet, tandis que le ministère des finances et le ministre d'Etat aux finances l'ont rejeté.

L'imposition de droits sur l'importation du matériel dentaire entraînera une hausse du coût des soins dentaires pour les Canadiens. Cette hausse paraît minime à l'unité, c'est-à-dire lorsqu'un patient se fait réparer une dent. Mais, en additionnant tous ces montants "minimes", on constate que la hausse du coût des soins dentaires représente une somme importante. La mesure va donc à l'encontre de la politique du gouvernement qui veut restreindre la hausse du coût des soins de santé, politique qu'appuie l'Association dentaire canadienne. Le geste du gouvernement actuel va également à l'encontre de la politique établie depuis longtemps, qui exempte du fisc l'équipement, les instruments et les autres articles dentaires, en vertu des tarifs douaniers et de la loi sur l'accise.

L'Association dentaire canadienne s'est donc opposée à l'imposition par le gouvernement fédéral de douanes sur le matériel dentaire. Ce qui importe encore plus, c'est que les membres de l'Association ont pris le temps d'exprimer leurs vues par écrit à leurs représentants élus.

Cette démarche personnelle des dentistes canadiens a entraîné la présentation à la Chambre des Communes d'un amendement au projet de loi C-50. Sachez que le comité des questions fiscales de votre Association est sensible à votre geste. Sans l'aide de tous et chacun, aucune association ni aucun comité ne pourrait s'occuper efficacement de questions nationales de cette importance.

Robert Hicks, dds, ms

Président du comité des questions fiscales

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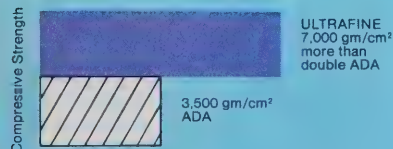
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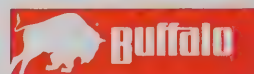
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1. Zacherl, W. A., "Clinical Evaluation of a Sodium Fluoride-Silica Abrasive Dentifrice." *Journal of Dental Research*, Vol. 60, Special Issue A, page 577, March, 1981.

2. Beiswanger, B. B., Gish, C. W. and Mallatt, M. E., "Effect of a Sodium Fluoride-Silica Abrasive Dentifrice Upon Caries." *Journal of Dental Research*, Vol. 60, Special Issue A, page 577, March, 1981.

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CANADIAN DENTAL ASSOCIATION

"Surprised and saddened" by letter

We are surprised and saddened by Dr. Swaine's interpretation (Letters, June, 1981) of the section Freedom of Choice, found in the article "Analyzing selected criticisms of water fluoridation", Supplement, Journal of the Canadian Dental Association, March, 1981. We feel that he has missed the purpose of the article which was to inform dentists about the various criticisms that might be encountered during a fluoridation campaign. As for the issue of freedom of choice, the realities of politics and government remain, regardless of any arguments for or against a particular ideology. In further response to the letter dated March 27, 1981 some general comments are offered to explain the position stated in the section.

Social research shows that opponents to water fluoridation represent a very small segment of the population. Furthermore, public opinion polls have repeatedly demonstrated the widespread public support for the measure. What seems puzzling then, is why Dr. Swaine is so concerned about this small but vocal group, yet so insensitive towards the problems of dental health in Canada. He implies that, "the inconvenience and expense of this (using a fluoride-free water source in a fluoridated community) let alone that person's individual loss of liberty", is a problem of comparable importance and magnitude to dental decay in Canada. Possibly Dr. Swaine is unaware of the fact that the average 13-

year-old in Quebec, which is largely non-fluoridated, has experienced eight and a half decayed, missing or filled teeth, five of these being in the decayed component. Furthermore, the pain associated with dental caries and the expense of treatment are problems of considerable importance. Dr. Swaine states that he "supports the views (safety and effectiveness) of the authors regarding fluoridation", however, he takes exception to the justification of the measure based on freedom of choice. I would urge Dr. Swaine to focus his attention on the realities of his position — increased occurrence of disease and suffering, and not on a peripheral argument pertaining to the method of delivery of a proven public health measure.

In this day and age, when a person's rights and freedoms are being eroded away on nearly every front, Dr. Swaine's concerns are shared by many, including these authors. However, good judgment must prevail, common sense must not be slighted because of an idealistic tenet. Relief from pain and suffering, and prevention of disease by a proven public health measure are ethical responsibilities of any health professional, ones which we will continue to promote, regardless of the criticisms from those who oppose fluoridation.

*D. Christopher Clark,
BS, DDS, MPH
W. Paul Lang, DDS, MPH
McGill University
Montréal, Québec*

CMA endorses CDA position

The Canadian Medical Association (CMA) has strongly endorsed efforts of the Canadian Dental Association (CDA) to promote renewed water fluoridation in Canada.

The CMA recognizes tooth decay as a major health concern.

The CMA states that extensive scientific research has established fluoridation to be an effective, safe and inexpensive method of preventing tooth decay — a recognized health problem of major concern.

The CMA considers essential the adjustment of community water supplies to the optimal level of fluorine for maximum prevention of tooth decay.

Together with the CDA, the Canadian Medical Association calls for increased awareness concerning water fluoridation. Health care professionals must recognize their responsibility for educating the public and their commitment to the new initiative.

The Canadian Dental Association recently reaffirmed its stand in favor of fluoridation after commissioning a comprehensive two-part report on the issue.

Titled "Water Fluoridation in Canada: A Status Report 1980" and "Analyzing Selected Criticisms of Water Fluoridation", the reports discuss current provincial policies, environmental and toxic effects, carcinogenesis, congenital malformations, allergies, and the issue of freedom of choice.

It was prepared for the CDA by Dr. Christopher Clark, of the department of community dentistry at McGill, and Dr. W. Paul Lang, of the dental division of the Detroit health department.

*W.D.S. Thomas, M.D.
President
Canadian Medical Association*

Tariffs brief presented to Senate committee

The following is the text of the oral submission made to the Standing Senate Committee on Banking, Trade and Commerce by Dr. Robert Hicks, chairman of the CDA Taxation Committee June 9, 1981 in Ottawa. Dr. Hicks also submitted a comprehensive brief.

Mr. Chairman and Honourable Members of the Committee;

My name is Dr. Robert Hicks and I am a practising dentist. I am appearing before you on behalf of the Canadian Dental Association. I am making this presentation in my capacity as a member of the Executive Council of the Association, and as Chairman of its Taxation Committee.

The Association is the national organization for the dental profession in Canada, representing 8,500 of the 10,000 dentists in Canada.

We are here to strongly object to the proposed amendment to Tariff Item 47810-1 contained in Bill C-50 which will impose tariff duties on dental materials used in reconstructive surgery, which items have by law been duty free ever since Tariff Item 47810-1 was introduced in 1963.

We are here as advocates of government dental health policies which will be in the best interests of Canadians. However, proposed imposition of duties on dental materials will directly result in increased costs to dental patients, and therefore will not be in their best interest.

Our members will receive no economic benefit from the success of our submission, nor will they be economically injured by our failure. The increased costs to dental patients result from the fact that costs of dental materials are passed on without mark up to such patients.

By way of background I note the following:

Tariff Item 47810-1 has provided

over the years that materials used in reconstructive surgery are not subject to duty. Notwithstanding this, the Government's practice was to collect duty on dental materials used in reconstructive surgery but not on materials used in reconstructive surgery when done by members of the medical profession.

In 1979 a Tariff Board decision held that the Government's practice was wrong, that is to say, such dental materials used in reconstructive surgery were not and are not subject to duty.

Now the Government wishes to reverse the law and impose duties only on dental materials.

Our brief, which we have submitted today, sets forth the reasons for our objection to proposed amendment. I wish to highlight for the Committee certain of the key reasons for our objection.

(1) The proposed amendment is contrary to the public policy of ensuring that health costs are as low as is consistent with a high quality of care. The amendment is contrary to the current general duty free treatment of dental equipment, supplies and materials under the Customs Tariff and of being exempt from sales tax under The Excise Tax Act.

(2) The proposed amendment is unwarranted discrimination against the dental component of public health in that medical (not dental) materials for reconstructive surgery are duty free.

(3) This proposed amendment will protect primarily one multi-product manufacturer who manufactures one type of dental material known as amalgam. We submit that the price to the public for each job in the protected manufacturing sector is excessive.

(4) The proposed amendment pe-

nalizes access by Canadian dentists to new formulas and advanced technology developed outside of Canada with resultant effects on the cost of dental health care.

(5) The proposed amendment is in violation of the spirit of Canada's most recent commitments under the General Agreement on Trade and Tariffs.

(6) The decision to make the proposed change was made without prior consultation with dentists and without full consideration of the issues. More time is required to analyse the proposed changes and their impact.

The Department of Finance takes the position that the Government always intended that dental (not medical) materials for reconstructive surgery be subject to duty. We do not see any basis for such a position and we expand on this in our brief.

The Department of Finance has recently stated that it will complete a review on the dutiable status of dental products, after the proposed amendment is implemented. We see no compelling logic in hastily changing existing law at the expense of dental patients and afterwards reviewing the issues.

The cost of increased dental materials will fall primarily on the most basic reconstructive surgery, that of filling cavities. The impact will therefore be greatest in the dental health maintenance of the average Canadian dental patient.

The Canadian Dental Association recommends that the proposed amendment which will impose duty on dental materials used in reconstructive surgery be deleted from Bill C-50 and that duty-free status be maintained in accordance with the laws of Canada, which have been in force since 1963.

I would be pleased to answer any questions the Committee may have.

Progress made on priorities workshop recommendations

The Canadian Dental Association has hired a consultant to develop a dental manpower evaluation plan; named a director responsible for the Resource Centre and hired a librarian; is monitoring institutional advertising; and has distributed a membership IQ questionnaire to alert the profession to CDA services and functions.

The above are just a few of the recommendations from the Workshop on Priorities held March 4 and 5 at Chateau Montebello, Québec.

More than 40 dentists, provincial and national staff participated at the request of the presidents, chief executive officers and registrars of the corporate bodies under the chairmanship of Dr. Nick Mancini and workshop facilitator Dr. K. Gordon, Director, Centre for Long Term Care, Minneapolis, Minnesota.

Participants were divided into seven groups, each to deal with a separate topic determined by the group. Through a repeated series of workshop discussions followed by a report to the entire body, the workshop sifted the material until final recommendations were proposed. This was described as the Delphi system.

The seven topics discussed included: manpower; accreditation; the Resource Centre, including a data bank and continuing education; government relations; public relations and communications; auxiliaries, including portability and alternate delivery systems; and membership services including insurance, internal politics and CDA's credibility.

CDA Executive Council noted that many of the recommendations have been implemented, others are in the implementation stage and still others have been referred to relevant councils for consideration.

The Association has hired econ-

omist R.K. House and Associates to prepare a proposal to provide consulting services in the preparation of a manpower study. This was the only recommendation from the workshop group discussing manpower.

The workshop participants dealing with accreditation proposed a series of minor modifications to existing programs which have been directed to the Councils on Education and Hospital Services for determination before the fall Board of Governors meeting.

The first and major priority of the Resource Centre working group has been accomplished through the naming of Ms. Linda Teteruck to Director of Education responsible for the Resource Centre and the hiring of a librarian Miss Margo Beres. Further recommendations from this group included the types of materials to be collected, a review of the existing facilities, the requirement for confidentiality in specific areas, a data bank and responsibility for continuing education.

Among the 11 recommendations from the working group on government relations was agreement that CDA should more actively pursue lobbying on a continuing basis and hire professional consultants and the services of a lobbyist, when required, to augment CDA executive and staff.

It was proposed that CDA recommend dental consultants for government administrative positions and establish government contacts long before issues develop. CDA notes that a senior dental consultant will be hired by the department of National Health and Welfare within the next six months and there will be CDA representation on the selection committee. Liaisons within government are being increased week by week.

It was agreed that CDA should continue its practice of working with

other professional organizations particularly in the taxation area and should aid provincial corporate bodies when requested. Access to government should be addressed through the public by means of advertising, education and media work shops. The latter proposal has been directed to the Council on Information Services.

Group five, in dealing with public relations and communications, proposed that CDA seek and maintain a high profile and strong communications with the public, the profession and internally.

The method selected for the public was institutional advertising. It is noted that major institutional advertising campaigns in both Canada and the United States are being monitored and recommendations will be forthcoming once final results have been tabulated from the test centres in both countries.

Communication to the profession is being accomplished through the president as spokesman for the organization, the Journal and information letters to the profession. This working group also proposed that CDA initiate and lead in the exchange of ideas with corporate bodies.

The group discussing auxiliaries, portability and alternate delivery systems defined CDA's role related to auxiliaries as an information gatherer, a forum for discussion, a liaison with national auxiliaries and a provider for accreditation programs. Under the discussion on portability it agreed that portability is desirable, a provincial responsibility, and that CDA should provide a forum for discussion.

This group also proposed that CDA gather and disseminate information on alternate delivery systems. The Journal of the Association has

already begun the dissemination by starting a series of articles on alternate delivery systems, the first on capitation. In addition, information will be collected for the Resource Centre.

The final working group on membership services suggested a more positive attitude on CDA activities should be promoted by organized dentistry at the provincial level.

A more specific proposal to employ Executive Council appointees as CDA spokesmen at the local society level and assist them through a media workshop was directed to Council

on Information Services for discussion.

A further proposal to establish a column of practical tips in the Journal in a "Practitioners Corner" — How to articles, has been relayed to the provincial contributors of the Journal listed on the masthead of the magazine.

And this final working group also recommended a membership survey to make members more aware of the services and functions provided by CDA. This survey in the form of a test your membership IQ was inserted in the June issue of the Journal.

Message encouraging

Encouraging messages about benefits of fluoride in fighting tooth decay were reported by doctors at the annual meeting of the International Association for Dental Research, held recently in Chicago.

Drs. Stanley B. Heifetz and William S. Driscoll, of the National Institute for Dental Research in the United States, conducted independent three-year studies in Iowa and Maine involving school mouthrinsing programs.

The doctors concluded that mouthrinsing in school with dilute solutions of sodium fluoride inexpensively reduces the high levels of tooth decay that occur in fluoride-deficient areas by about 30 per cent. They also found that mouthrinsing with fluoride reduces the level of decay in fluoridated areas by about the same percentage.

Also at the meeting, NIDR scientists reported on a clinical study of a device worn inside the mouth which releases fluoride continuously over a long period of time.

The scientists found that the device can maintain fluoride concentrations high enough to prevent tooth decay for at least a month.

CDA Retirement Savings Plan

Unit values of the Canadian Dental Association's Retirement Savings Plan stood as follows on May 31, 1981.

<i>Common Stock Fund</i>	\$57.3019
<i>Fixed Income Fund</i>	\$23.5980
<i>Guaranteed Fund</i>	\$20.0481
<i>Balanced Fund</i>	\$13.3165

Total assets (market value) of the plan were \$33,898,852.

The previous month's figures, as of April 30, 1981, stood as fol-

lows:

<i>Common Stock Fund</i>	\$57.1339
<i>Fixed Income Fund</i>	\$23.4507
<i>Guaranteed Fund</i>	\$19.7926
<i>Balanced Fund</i>	\$13.0748

Total assets (market value) of the plan were \$33,717,038.

For further information write to: Canadian Dental Service Plans Inc., P.O. Box 7500, Station A, Toronto, Ontario M5K 1A0.

Régime d'épargne-retraite de l'ADC

Les valeurs respectives du Régime d'épargne-retraite de l'Association Dentaire Canadienne étaient les suivantes au 31 mai 1981.

<i>Fonds d'actions ordinaires</i>	\$57.3019
<i>Fonds à revenu fixe</i>	\$23.5980
<i>Fonds garanti</i>	\$20.0481
<i>Fonds de placement</i>	\$13.3165

L'avoir total (valeur marchande) du régime s'élevait à \$33,898,852.

Au 30 avril 1981, les chiffres du mois précédent étaient les suivants:

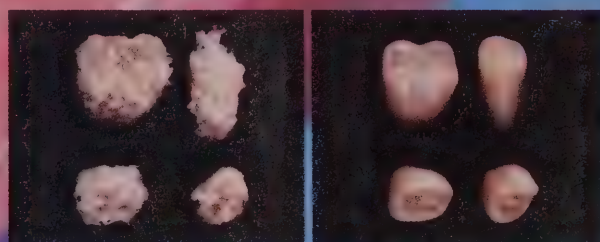
<i>Fonds d'actions ordinaires</i>	\$57.1339
<i>Fonds à revenu fixe</i>	\$23.4507
<i>Fonds garanti</i>	\$19.7926
<i>équilibré</i>	\$13.0748

L'avoir total (valeur marchande) du régime s'élevait à \$33,717,038.

Pour obtenir tout renseignement supplémentaire, prière de s'adresser aux: Régimes des rentes et d'assurances subventionnés par l'ADC, P.O. Box 7500, Station A, Toronto, Ontario M5K 1A0

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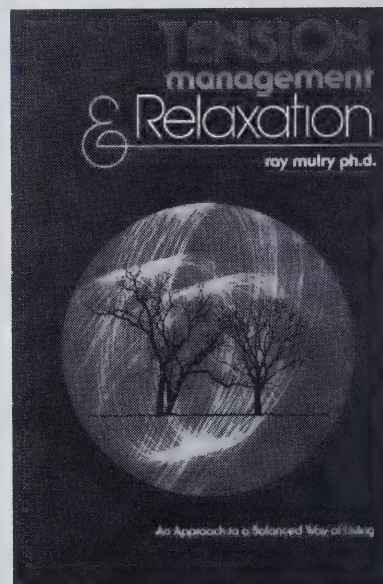
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Journal of Dental Research, Jan 79, Vol. 58, P. 239,
Abstr 585
Nygaard-Østby, P., et al, Jordan as Oslo, Norway; U Pa
Sch Dent Med, Phila, Penn.
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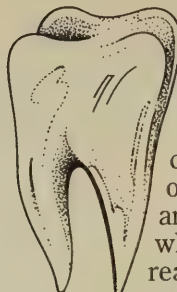


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"Don't be afraid of me" Howie Rocket says

Somewhere near the back of the Towers department store, beyond the displays of household goods and wicker baskets, the whine of a dental drill — for a moment — rises above the sound of piped-in Muzak.

Outside it's raining. Shoppers, who earlier were wandering the outdoor mall in this Mississauga suburb, have made a dash for the dryness and comfort of the store's women's wear, shoe section or appliance shelves.

As a way of killing time until the weather clears, they head for the coffee shop, dally at the cosmetics counter, linger in the record department.

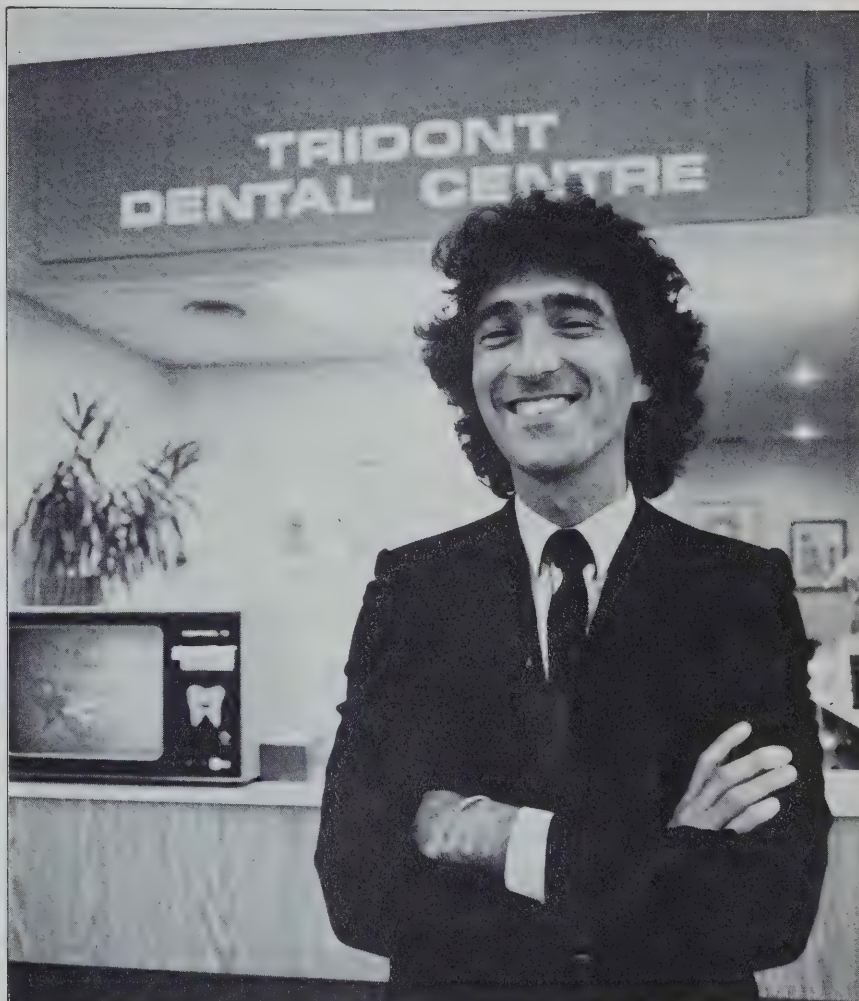
But for dentist Howie Rocket, he's betting that sooner or later, one of those shoppers is going to walk up to his counter and ask how much a filling costs.

Dr. Rocket has been operating the Tridont Dental Centre in the Towers store for just over a year. During that time, he says the store has done more than 700,000 transactions and the dental centre, with its reception desk in the store aisle, has had 400 to 500 potential patients a day walk by the counter.

For Dr. Rocket, retail dentistry is a viable dental delivery system geared toward reducing patient fear and suspicion, while improving the oral health of the 50 per cent of people that he says never see the inside of a dentist's office.

But to many of his colleagues, Tridont Dental Centres are a threat. Their suspicions revolve around not how much Dr. Rocket's procedures are going to physically hurt — but how much his delivery system will hurt their own practices and the reputation of the dental profession in general.

At 33, Howard Rocket is something of a wonderkind. He's been operating



Dr. Howie Rocket stands before his first Tridont Dental Centre in a Mississauga department store. The Ontario dentist predicts that he and his partner, Dr. Brian H. Price, will be opening three to five new centres a year.

his own private Mississauga practice for nine years. Last year, he launched the first Tridont Dental Centre with a partner, Dr. Brian H. Price of Toronto, and to complement it, a seven-day-a-week emergency service from a dental office in north Toronto. Within three weeks last month, the two doctors opened three more centres — in department stores in Sudbury, Toronto and another in Mississauga. And according to Dr. Rocket, it's just the beginning.

Future projections call for a centre to open in an Ottawa Towers store

this fall. Long-range plans call for Tridont to offer its services in Woolco stores in Calgary, Edmonton, Vancouver and Halifax; in Simpsons in Montreal and Halifax; and negotiations are now under way with the Bay in Ontario.

"We've contacted every major department store in Canada," Dr. Rocket says. "We're looking at opening three to five new centres a year."

A constant criticism of retail dentistry by opponents is that the quality of the service leaves something to be desired. They claim patients never see

In the News

the same dentist twice, profit is put ahead of professionalism, and the bottom line dictates policy.

Dr. Rocket replies: "Untrue."

Pointing out that the Royal College of Dental Surgeons of Ontario certifies the dentists who work for him, Dr. Rocket asks in exasperation how the quality the centres offer can be any less than that offered by dentists in private practice. He feels he's doing the College a service.

"I tell the profession, 'Don't be afraid of me. I'm taking young people out of school and putting them into practice. I'm providing patients to new graduates. I'm not competing, I feel I'm helping the traditional offices. These patients were not seeing a dentist in the first place. Eighty per-cent

of our new patients haven't seen a dentist in two to five years. So don't be frightened.'"

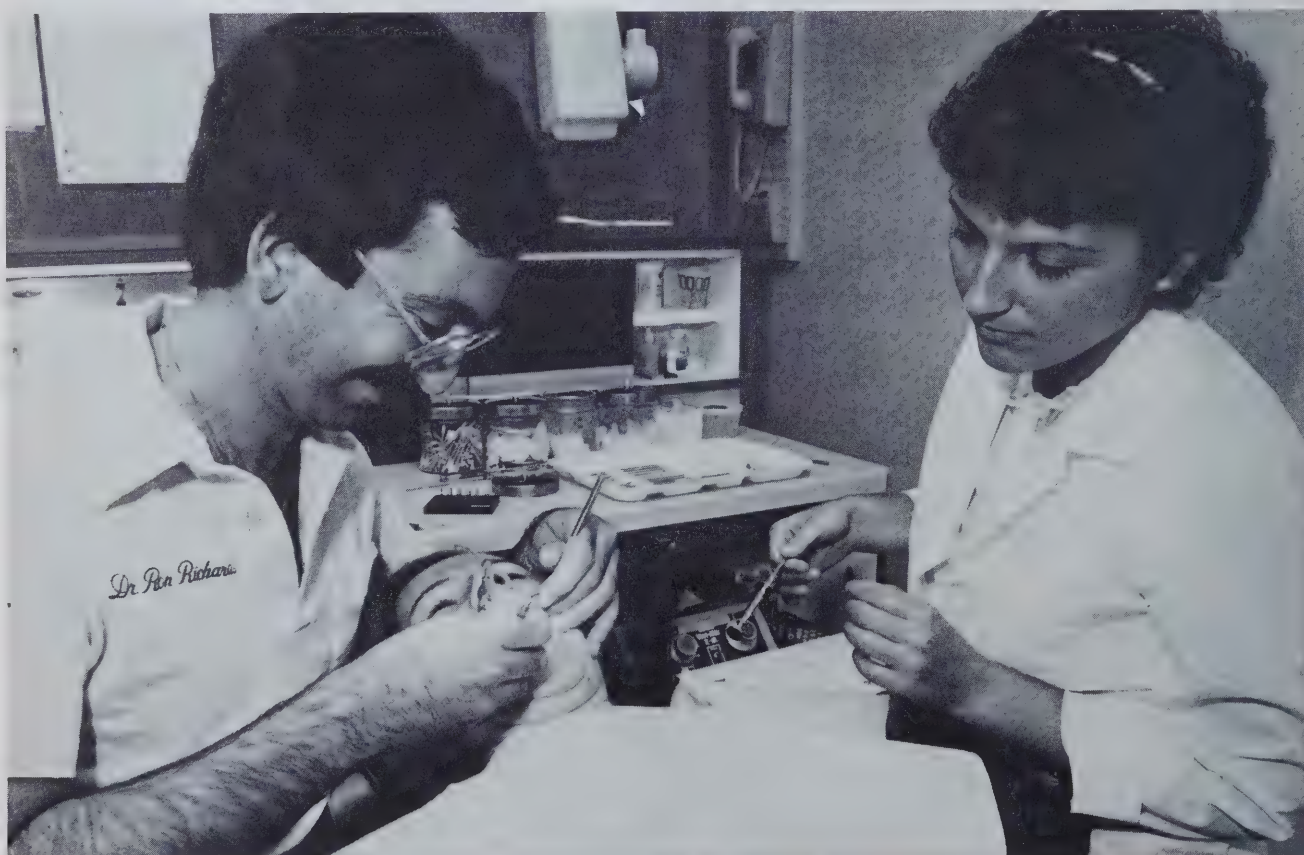
Dr. Rocket has other statistics. He says his oldest established Mississauga centre gains four to five new patients a day from the flow of shoppers and the receptionist receives 15 to 20 inquiries a day. He adds that 85 per cent of the patients are on recall and 75 per cent of the emergency patients become regular patients.

"I post my fee schedules because it reduces the fear of cost, even though it doesn't remove the pain of cost." Dr. Rocket said "But like most other dentists in Canada, we're still two years behind inflation with our prices. I don't want to go discount because I

don't like the connotation. I feel I'm offering a fair fee for service."

For patients of Tridont Centres though, there's another benefit besides knowing the approximate cost of a procedure before even speaking with a dentist. That benefit is accessibility. By keeping the same hours as the Towers store — from 10 a.m. to 10 p.m. — the Mississauga centre is offering convenience to the working mother, the teen-age student, the laborer on shifts. It is a tangible advantage which both opponents and advocates agree is the real drawing card of retail dentistry.

Dr. Rocket points out other advantages. The familiar surrounding of a department store reassures the



Dr. Ron Richardson and his assistant Anne-Marie Greyerbiehl attend to one of the dental centre's patients. Dr. Rocket says the Tridont concept gives new dentists an opportunity to practise and provides dental care to patients who normally never see a dentist.

nervous patient who avoids dentists. With the escalating prices of gasoline, retail dentistry also provides one-stop shopping. The Tridont Dental Centres carry this advantage one step further. Parents bringing their children to the dentist can leave their child in the office, do their shopping, and be summoned back to the reception desk with a beeper system once treatment is completed.

But what Dr. Rocket likes to emphasize is that once the patient gets past the reception desk and waiting room of a Tridont Centre, he's in a professional dental office — no tricks, no gimmicks — just quality care.

For example the Towers centre in Mississauga offers the services of seven dentists, a hygienist, an orthodontist who works part-time and 12 women who include dental assistants, receptionists and the office manager. There are two shifts. There's a private consulting room, four operatories, two hygiene rooms and a recovery room for patients who have undergone general anesthesia.

The appeal of retail dentistry to some patients obviously does not endear Dr. Rocket to those dentists who are vehemently opposed to it. He admits there has been a "tremendous backlash" from members of the profession.

"But it doesn't bother me," he insists. "I know I'm not offering discount dentistry or a fly-by-night type of thing. We're following the Health Disciplines Act to the teeth. I don't know how people could think we're doing otherwise. If we weren't, the government would close us down in a minute."

The appeal of retail dentistry also appears to be having an effect on young graduates. According to Dr. Rocket, he is receiving more and more inquiries from new dentists. As he

puts it — "A desire to work overcomes their skepticism."

The system Dr. Rocket and Dr. Price offer is simple. A Tridont Dental Centre is set up with an established dentist. This dentist owns a portion of the practice, although Dr. Rocket and Dr. Price continue to retain majority ownership. New graduates are offered a position in the practice as associates. If they work out, eventually they may also be given the opportunity to own a portion of it. Dr. Rocket says such a system guarantees a stability in the practice and an incentive for young dentists to work hard. As an associate, the young dentist receives a percentage of the practice's gross and the patient receives his treatment from the same dentist.

Why did Howie Rocket leave a nice, safe practice in an enviable area to take on the dental profession and make waves?

"I'm always accused of being in this thing because I just want to make money," he says. "Well I'll tell you, I could make a lot more money by just staying in my own practice."

"But I did a lot of research first in the States and I was finding the same situation there. Patients were not seeing dentists. The needs of the public were not being answered by dentists — not in terms of quality of care, but in terms of delivery."

Dr. Rocket says by launching a retail dentistry operation he fulfils his own need to be creative. But even more important, he says he believes he is fulfilling the needs of the public.

"In the past, the dental profession didn't market itself. Marketing was taboo," Dr. Rocket said "But today, I tell the profession that these changes are going to come anyway. I say, 'Be on the side of change and help direct it. Let's educate our patients more on the practice of dentistry.'"

"I laugh when people call it department store dentistry. It's the same dentistry. What about when dentists open a practice over a bank? What do you call that? Over-a-bank dentistry?"

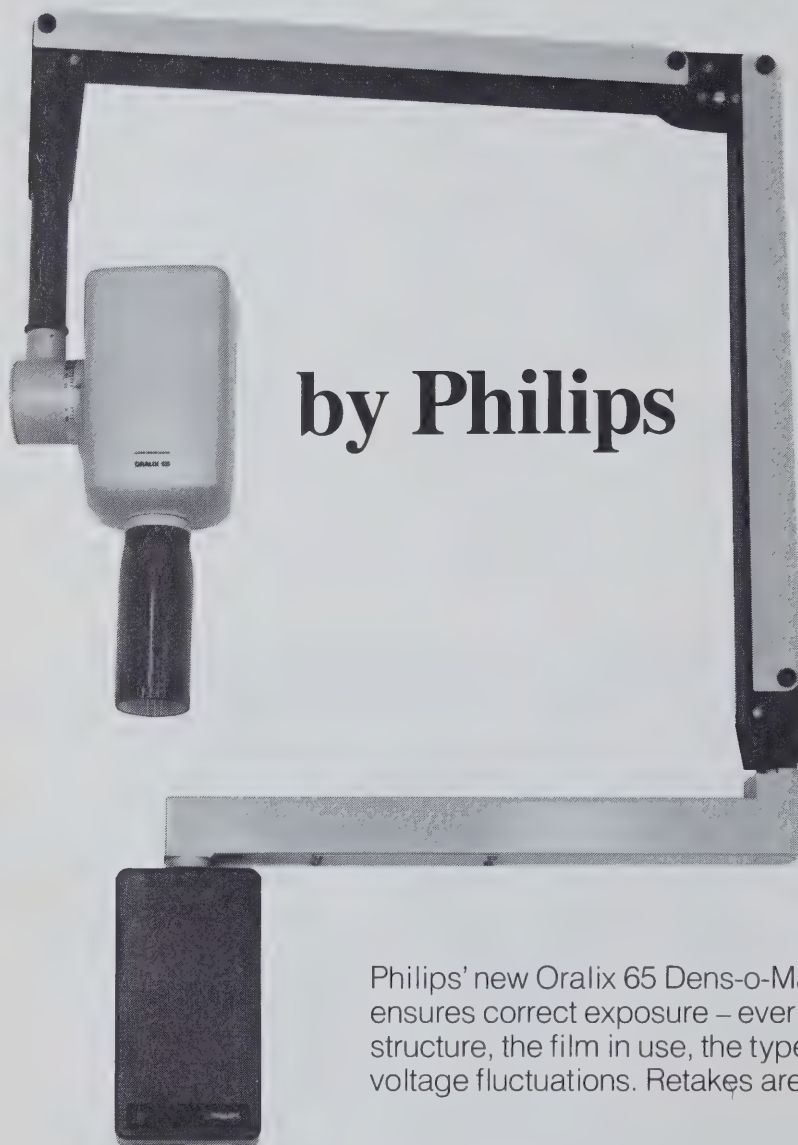
Dr. Rocket says the rumors which circulate about his operation are untrue. His dentists have no quotas to fulfill. They are not on salary and they don't have to put up any money to work in the practice. The department stores do not receive a percentage of the practice's gross, but only a straight rental fee. Access to the dental centres by a dentist, even after the store closes, is a condition of the rental contract. He insists that Tridont dentists have at least 25 hours a year of continuing education courses. And he adds that a patient who has phoned the centre at any time for emergency service has a dentist return his call within 20 minutes. If the answering service cannot reach the dentist on call, they phone Dr. Rocket.

As for other changes in dentistry in the future, Dr. Rocket has mixed feelings. He predicts advertising is on its way, but dislikes much of what is allowed in the U.S. and says there should be strict guidelines. He is against price wars and says the dentist is a professional and should act like one. He is also opposed to closed panel capitation and feels dentists should be wary of franchise outfits.

And as for his own future? Howard Rocket is optimistic. No matter how his retail venture fares, he plans to continue to practise dentistry. Of course if his centres are successful, it will mean less hours than the four days a week he puts in now, but he says he's determined not to give it up.

"I always wanted to be a dentist and I'm going to stay a dentist," he says. "But we can't put our head in the sand anymore and believe what was 10 years ago is still today."

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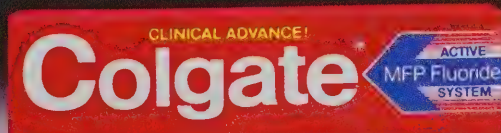
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*Published by the British Dental Journal, October, 1980.

**Evaluation of the National Institute of Dental Research National Caries Program. Volume 1, November, 1979, Page 56.



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New ODA president seeks to manage, not scramble



Dr. Robert Schiewe, of Thunder Bay, accepts the ODA chain of office from Immediate Past President, Dr. Brad Holmes, of Kenora. Dr. Schiewe was installed as president of the ODA at the association's Annual Spring Meeting in May. Dr. Dennis Smith, of Belleville, is the new president-elect.

The Ontario Dental Association will continue to manage change within the profession rather than scramble to cope with it after it occurs.

This was the message delivered by Dr. Robert Schiewe as he was installed as president of the ODA May 26. He succeeds Dr. Brad Holmes of Kenora.

Dr. Schiewe, a Thunder Bay dentist, told his audience the ODA has many tasks already assigned to committees responsible for managing change in the dental profession.

Some objectives to be met include further development of continuing education for ODA members, extensive bylaw changes to implement administrative changes proposed by the ODA Restructuring Committee and more investigation of alternate delivery systems.

Dr. Schiewe also addressed the dental therapist issue. He said significant progress has been made in making dental care more accessible, but there are still problem areas, particularly regarding native people.

The federal government now trains dental therapists in some areas to meet native needs. Dr. Schiewe reminded dentists that unless the profession can assure that natives are receiving competent, professional care

from dentists, they can only object to this training program on philosophical grounds.

He said the ODA is making "extensive efforts" to meet the needs of natives and urged dentists to participate in an outreach program.

"I believe that applying your skills for two or three weeks in a remote area will be a refreshing change and a stimulant which will enhance your outlook in your own practice," he said. "Extensive participation is necessary for the achievement of ODA goals."

Dr. Schiewe said methods must be found to solve the problem of dental manpower. He pointed out that a study recently completed by Dr. Don Lewis showed that if all factors remain as they are, by 1996 there will be little or no demand for approximately 4.3 million appointment time slots.

"It takes 1,145 dental practices to supply that many appointments in one year," he explained. "That should indicate to you the size of the problem that faces us."

Dr. Schiewe said reducing the number of dental graduates and increasing the percentage of the public seeking dental care are two steps that must be taken.

However, he warned that the development of new dental delivery systems may not hold all the answers.

"There is a public perception that an oversupply of any service stimulates competition on a price basis which is desirable from the consumer's point of view," Dr. Schiewe said.

"I reject this philosophy as it applies to dentistry. I cannot believe that the public will be well served by cut-throat competition among members of the dental profession unless the public had some way of being truly knowledgeable about the nature of dental services that they require and had the ability to place a monetary value on

that service."

He said instead of competition among members of the profession, dentists should seek ways of changing the public perception of dental health care needs.

Dr. Schiewe said although the ODA has launched a test case in television advertising in Peterborough which is expected to go province-wide next year, advertising can only bring people into the office.

"It will be up to you as individuals to make sure that you and your office staff communicate effectively with these potential new patients so that they are motivated to seek ongoing dental care," he said.

Dr. Holmes also referred to problems of dental manpower. However, he said he did not believe "the disease" infecting the dental profession is caused solely by too many dentists or too few patients.

"I believe that the true disease is one that is epidemic in our modern urbanized society — that disease is selfishness," Dr. Holmes said "Too many of us — dentists and patients — put our economic interests ahead of our consideration of the needs of others. Too many of us accept the attitude that if it is rewarding to me, it must be right.

. "I challenge you to look at yourselves and to look at the standards that you accept. Do they please you, would they please your innermost conscience, or your children? If not, please do something about it and help us to help the rest of the profession do likewise."

Both Dr. Holmes and Dr. Schiewe spoke optimistically about the future of dentistry and the need for individual dentists and organizations to work together. Dr. Schiewe urged ODA members to tell him their concerns so he can make every effort to act on their behalf.

CDA president urges active participation by dentists

Canadian Dental Association President Dr. Gilbert Utas has called on dentists to "speak out and actively participate" in fluoridation campaigns.

Speaking at the Ontario Dental Association's Annual Meeting, Dr. Utas told his audience the dental profession must do everything in its power to promote fluoridation.

He said the CDA has recently reaffirmed its position in favor of fluoridation of public water supplies and released a comprehensive report on the subject.

Acknowledging CDA's responsibility for leadership within the profession, Dr. Utas reminded Ontario dentists their help as individuals is essential.

"To assist you, the CDA initiative on fluoridation also contains a guide on how to conduct provincial fluoridation campaigns and a similar guide for local campaigns," he said.

Dr. Utas emphasized that fluoridation has "the enthusiastic endorsement" of the Canadian Medical Association, and the Canadian Paediatric Society has asked how they can support CDA efforts. As well, he said fluoridation has the endorsement of every major health organization in Canada, and the federal government and CDA are discussing the feasibility of a symposium workshop on the topic.

Other key challenges which Dr. Utas said the profession is facing include the dental manpower issue and government tariffs.

He reassured his audience that CDA is working closely with provincial associations and Health and Welfare Canada on the dental therapists issue.

In the past, dental therapists have been trained by the government at a school in Fort Smith, Northwest Territories. However, because there is no

longer a sufficient patient base to justify operating the school at Fort Smith, relocation plans are underway.

Dr. Utas said the dental profession wants the school to be relocated in Yellowknife. However, he said studies have shown there is not as much of a need for the services of dental therapists as first imagined.

Recognizing this, Dr. Utas said the Medical Services Branch of the government has pledged to reassess its training program within three years and close the new proposed school if the dental profession can meet native needs.

"What we must consider is the development of a training program whereby the same facilities and staff for dental therapists could be used to provide preventive dental auxiliaries," he said.

"Native and northern students trained as preventive auxiliaries could serve a most valuable role in education of the people in remote areas A program of training such as this could be surveyed and accredited by the Canadian Dental Association and then would receive the support of the profession."

Dr. Utas also noted that discussions are well underway between the profession and the government regarding tariffs.

He said the profession wants all materials and articles used in the manufacture of dental surgical prostheses in dental reconstructive surgery to be allowed duty-free entry into Canada.

Dr. Utas said that thanks to the intervention of the profession and the CDA, the government is now undertaking a full review of the tariffs on dental materials. He also said Health and Welfare Minister Monique Bégin was studying the effect the tariffs will have on dental care costs to Canadians.

Dr. Utas stressed that members of the profession will have to work together to meet these challenges.

"Remember, in unity there is strength," he said. "And we must be unified as a profession to meet the challenges ahead."

"We are not a we and they profession, we are not structured as a pyramid — We must move forward together."



Dr. Robert Schiewe, president of the ODA; Dr. Gilbert Utas, president of the CDA; and Dr. N. Mancini, chairman of the Board of Governors; exchange views during the ODA Annual Spring Meeting.

Dentists can ease x-ray concern

Dentists have been at the forefront in implementing radiation protection measures, but there is always more to learn.

Dr. W. Ross Barlow, a Hamilton dentist, told a packed seminar at the Ontario Dental Association's Annual Meeting, that dentists and their staff have to be more aware of their X-ray machines.

Noting that much is still unknown about the effects of radiation, Dr. Barlow said it is often difficult for dentists to answer patient's questions. He said statistical evidence available only applies to damage caused by high dosages.

The effects of low dosages has not been discovered, but Dr. Barlow said he felt the dentist can still put the problem of radiation in perspective to patients.

"Sure there is a chance of risk and let's not deny that fact," he said. "But risk means only a chance of danger and there is that chance in everything we do."

A private practitioner and part-time instructor at University of Toronto, Dr. Barlow first became interested in radiation when adverse publicity surrounding the subject began to appear a few years ago.

Since then, he said he has learned there are several precautions which dentists can take.

Dr. Barlow said dentists must first realize there are different kinds of dangers associated with radiation.

Immediate dangers from acute radiation can cause erythema, a redness of skin which can lead to dermatitis. White blood cells can also decrease, which will give the body less chance to fight infection and which will result in the dermatitis taking longer to disappear, he said.

Conjunctivitis of the eye can also develop from radiation and if the dosage is extremely high, it can lead

to cataracts. Sterility is another result, and with tongue-in-cheek, Dr. Barlow advised his audience not to use radiation for birth control.

He added that these four situations can disappear once radiation stops, but a minimum effect is cumulative and increases each time radiation is used.

A second category of dangers are the delayed effects of radiation.

For example, erythema can eventually lead to necrosis. Dr. Barlow said there is still a "grey zone" in which scientists are unsure if leukemia can develop, but other effects are known. A 10 rem (r) exposure of radiation to a pregnant woman can cause misdevelopment of the dental structure of the fetus, he said. There also can be genetic effects and damage to developing tissues, particularly the thyroid, from radiation.

"But how many of you have ever seen these things occur in the dental office?" he asked.

Dr. Barlow emphasized these results would only be caused by extremely high dosages of radiation. He said the only evidence he has ever seen of similar problems is from older dentists who for years held the film in the patient's mouth when taking X-rays. Eventually, some of them lost a thumb or nail from necrosis.

Using 70 KV machinery and one dental film when doing a bite wing X-ray, Dr. Barlow said research has shown that the target tissues will receive 270 millirems or 270 mr of radiation ($1,000 \text{ mr} = 1 \text{ r}$), if the machinery has a lead-lined, open-end cone.

In the same example, he said tissues outside the target field will receive 10 mr of radiation and the thyroid will receive approximately 1 mr. Gonadal tissues, which are higher up than female ovary tissues, will receive from .1 to .00045 mr.

Dr. Barlow said researchers con-

cluded that 1 mr would represent radiation to the entire body.

But even so, he warned his audience they should still take every precaution.

"I say follow the Alara Principle," he advised. "No matter how low the dosage is, you should always try to reduce it further."

Dr. Barlow suggested dentists can always increase the aluminum filtration in their machines as an added protection measure. He said films should never be hand-held in the patient's mouth because it is a hard habit to break, once started.

Other suggestions included using fast film which will reduce exposure time and standing eight to 10 feet from the machine. Dr. Barlow said if dentists could not do that because of space problems, they should use portable lead shields.

"And remember," he added, "every time you double your distance from the machine, you quarter the dosage. It's the inverse square law."

As for the patient, he said dentists could further guarantee their protection by inquiring about their general radiation treatment history. He said his personal practice was to take as few X-rays as possible of pregnant women and if there is a risk to the thyroid area, he recommended the use of a lead apron or at least a lead collar.

Dr. Barlow advocated more service checks of X-ray machines by the companies which manufacture them.

"We have to become more aware of what these machines can do," he said. "When we see something inconsistent happen, we should wave a red flag."

"Many dentists think they're making a mistake in the darkroom, when it's the machine that's in error."

However, he also cautioned dentists to examine their darkroom work as well. Dr. Barlow estimated that 40 per cent of radiation problems could be cleared up in the darkroom by eliminating haphazard timing and other errors.



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Mémoire sur les tarifs au comité sénatorial

Voici les propos que le Dr Robert Hicks, président du Comité des questions fiscales de l'ADC, a tenus le 9 juin 1981, à Ottawa, devant le Comité sénatorial permanent de la banque et du commerce. Le Dr Hicks a présenté également un mémoire complet.

Monsieur le président, Honorables membres du comité,

Je suis le Dr Hicks, dentiste. J'ai l'honneur de représenter l'Association dentaire canadienne, à titre de membre du conseil exécutif de l'Association et de président de son Comité des questions fiscales.

L'Association est un organisme national qui regroupe les membres de la profession dentaire du Canada. Elle représente ainsi 8 500 des 10 000 dentistes du pays.

Nous venons nous opposer fermement à l'amendement que le projet de loi C-50 veut apporter à l'article 47810-1 des tarifs douaniers, et qui aura pour effet d'imposer des frais de douane sur le matériel dentaire servant à la chirurgie restauratrice, matériel qui fait l'objet d'une franchise depuis l'adoption de l'article 47810-1 en 1963.

Nous nous faisons les avocats des politiques gouvernementales en matière de santé dentaire, pour le plus grand avantage des Canadiens, qui seront compromises par la hausse du coût des soins dentaires qu'entraînera à coup sûr l'imposition de droits de douane sur le matériel dentaire.

Nos membres ne retireront aucun avantage économique de notre démarche si elle réussit, pas plus qu'ils n'en souffriront si elle échoue, car la hausse du coût du matériel dentaire passe telle quelle au patient qui en fait les frais.

A titre d'information, j'aimerais rappeler ceci.

L'article 47810-1 stipule depuis des années que le matériel servant à la chirurgie restauratrice fait l'objet d'une franchise douanière. Néanmoins, le gouvernement a pris l'habitude d'imposer des frais de douane sur le matériel servant à la chirurgie restauratrice, sauf si celle-ci est faite par un membre de la profession médicale.

En 1979, une décision de la Commission tarifaire a jugé que le gouvernement faisait erreur et que le matériel dentaire servant à la chirurgie restauratrice avait toujours été exempté des frais de douane et l'était encore.

Aujourd'hui, le gouvernement veut révoquer la loi et imposer des droits sur le matériel dentaire seulement.

Le mémoire que nous vous avons présenté aujourd'hui indique pourquoi nous nous opposons à l'amendement proposé. Le Comité me permettra de souligner les principales raisons qui y sont exposées.

1) L'amendement va à l'encontre de la politique qui cherche à maintenir le coût des soins de santé aussi bas que le permet l'excellence des soins. Il contredit les tarifs douaniers qui accordent actuellement une franchise à l'équipement, aux fournitures et au matériel dentaires, ainsi que la loi sur l'accise qui les exempte de taxes.

2) L'amendement proposé crée une distinction injustifiée qui accorde, au détriment de l'élément dentaire de la santé publique, une franchise au matériel médical (pas dentaire) servant à la chirurgie restauratrice.

(3) L'amendement protège principalement un fabricant qui, parmi ses nombreux produits, compte un genre de matériel dentaire appelé amalgame. A notre avis, la population en paiera un prix excessif comme pour tout travail fait dans un secteur privilégié.

4) Tout en ayant des répercussions sur le coût des soins dentaires, l'amendement cause un préjudice aux den-

tistes canadiens qui veulent avoir accès à de nouvelles formules ou à une technologie avancée, mises au point à l'étranger.

5) L'amendement transgresse, dans leur intention, les engagements tout récents du Canada en vertu des accords du GATT.

6) La décision de modifier les tarifs a été prise sans consultation préalable des dentistes et sans examen minutieux des questions qu'elle soulève. Il faut plus de temps pour examiner les modifications proposées et leurs répercussions.

Le Ministère des finances soutient que le gouvernement a toujours eu l'intention d'imposer des droits sur le matériel dentaire (pas médical) servant à la chirurgie restauratrice. Nous ne voyons aucun fondement à une telle attitude et notre mémoire en fait longuement état.

Le ministère a déclaré récemment qu'il réexaminera entièrement l'imposition des droits de douane sur les produits dentaires, après l'entrée en vigueur des modifications proposées. Aucune logique impose de modifier à la hâte la loi actuelle, aux dépens des patients dentaires, pour ensuite réétudier la question.

La hausse du coût du matériel dentaire frappera d'abord la chirurgie restauratrice la plus élémentaire, l'obturation des dents. C'est donc le Canadien moyen qui en assumera la plus grande part des frais, s'il veut garder ses dents en bonne santé.

L'Association dentaire canadienne recommande que l'amendement proposé, qui aurait comme conséquence d'imposer des droits sur le matériel dentaire servant à la chirurgie restauratrice, soit biffé du projet de loi C-50 et que la franchise soit maintenue conformément aux lois du Canada, qui sont en vigueur depuis 1963.

Il me fera maintenant plaisir de répondre aux questions du Comité.

Le suivi de la conférence sur les questions prioritaires

Engagement d'un spécialiste pour mettre au point un plan d'évaluation de la main-d'oeuvre dentaire; nomination d'un directeur au Centre des ressources et embauche d'une bibliothécaire; surveillance de la publicité institutionnelle; enfin, diffusion aux membres de la profession d'un questionnaire visant à faire connaître les services que leur offre l'ADC et le rôle qu'elle joue.

Ce ne sont là que quelques-unes des mesures que l'Association dentaire canadienne a prises pour assurer le suivi de la conférence sur les questions prioritaires, qui a eu lieu les 4 et 5 mars au Château Montebello (Québec).

Une quarantaine de dentistes de même que le personnel des bureaux national et provinciaux avaient été invités à joindre leurs présidents respectifs, leurs directeurs généraux et les registraires des corporations professionnelles à ces assises qui furent présidées par le Dr Nick Mancini et animées par le Dr K. Gordon, du "Centre for Long Term Care" de Minneapolis (Minnesota).

Suivant la méthode Delphi, les participants ont été répartis en sept ateliers, chacun établissant le sujet de ses discussions. Après plusieurs séances, chaque atelier a mis au point un compte rendu qui a été soumis à l'examen minutieux de l'assemblée des participants et donné lieu à un certain nombre de recommandations.

Les discussions ont porté sur les sujets suivants: la main d'oeuvre, l'agrément, le Centre des ressources, y compris l'établissement d'une banque d'informations et la formation permanente, les relations avec le gouvernement, les relations publiques et les communications, les services auxiliaires, y compris la transférabilité et les autres formes de prestation des services, ainsi que le service des membres, notamment les assurances, les

politiques internes et la crédibilité de l'Association.

Le conseil exécutif de l'ADC fait remarquer que plusieurs des recommandations ont déjà été mises à exécution, que d'autres sont en voie de l'être et que d'autres encore ont été confiées à l'examen des conseils concernés.

Pour donner suite à la seule recommandation issue de l'atelier sur la main-d'oeuvre, l'Association a demandé à la firme d'économistes R.K. House and Associates de lui présenter, à titre de consultant, une offre de services pour mettre au point un projet d'étude de la question.

Les participants de l'atelier sur l'agrément ont proposé une série de modifications mineures aux programmes actuels. Ces recommandations ont été acheminées aux conseils de l'éducation et des services hospitaliers, qui devront en disposer avant l'assemblée d'automne du Bureau des gouverneurs.

La recommandation première de l'atelier sur le Centre des ressources a déjà été mise en oeuvre par la nomination de Mme Linda Teteruck au poste de directrice de la formation, chargée du centre, et l'engagement de Mlle Margo Beres à titre de bibliothécaire. Les autres recommandations du groupe ont porté sur la documentation à colliger, sur l'équipement actuel, le caractère confidentiel de certains sujets, l'établissement d'une banque d'informations et la formation permanente.

Parmi les recommandations de l'atelier sur les relations avec le gouvernement, les plus importantes ont porté sur l'exercice de pressions plus actives et plus soutenues, et sur l'engagement au besoin de conseillers et d'un représentant pour soutenir l'exécutif et le personnel de l'Association.

Il a été proposé que l'ADC fasse au gouvernement ses propres recomman-

dations concernant la nomination de consultants dentaires à des postes de l'administration publique et porte les problèmes à l'attention du gouvernement bien avant qu'ils ne prennent de l'ampleur. L'Association souligne que le Ministère de la santé et du bien-être engagera un consultant dentaire d'ici six mois et qu'elle sera représentée au comité de sélection. Les relations avec le gouvernement se font plus intenses de semaine en semaine.

Il a été convenu que l'ADC continue de collaborer étroitement avec les autres organismes professionnels notamment en ce qui a trait aux questions fiscales et, au besoin, qu'elle offre son aide aux corporations provinciales. Les communications avec le gouvernement devraient se faire publiquement par le truchement de la publicité, de séance d'information et de rencontres avec les représentants des médias. Cette proposition a été transmise au conseil des services d'information.

L'atelier sur les relations publiques et la communication a recommandé que l'ADC cultive son image de marque et entretienne des communications étroites avec le public, la profession et les membres.

En ce qui a trait au public, les participants ont recommandé le recours à la publicité institutionnelle. D'importantes campagnes de ce genre sont menées actuellement au Canada et aux Etats-Unis. Elles donneront lieu à des recommandations plus précises dès qu'on en connaîtra les résultats dans chacun des deux pays.

La communication avec la profession se poursuit grâce au interventions du président, porte-parole de l'organisme, au Journal et aux bulletins d'information qui sont envoyés aux membres de la profession. L'atelier a aussi suggéré que l'Association prenne l'initiative des communica-

tions avec les corporations professionnelles.

L'atelier qui a traité des services auxiliaires, de la transférabilité et des autres formes de prestation des services estime qu'en ces domaines l'ADC doit servir d'agent d'information, de forum de discussion, d'agent de liaison avec les services auxiliaires nationaux et de pourvoyeur en ce qui a trait aux programmes d'agrément. Quant à la transférabilité des services, il a été reconnu qu'elle était souhaitable et qu'il s'agissait d'une responsabilité provinciale, mais que l'ADC devait en favoriser la discussion.

L'atelier a aussi proposé que l'ADC collige et diffuse l'information sur les

autres formes de prestation des services. Le Journal de l'Association a déjà commencé de le faire, en lançant une série d'articles sur la question, le premier traitant de la "capitation" ou rémunération par tête. En outre, l'information sera colligée pour le Centre des ressources.

Enfin, l'atelier sur le service des membres a suggéré que les organismes provinciaux de la dentisterie encouragent le développement d'attitudes plus positives envers les activités de l'ADC.

Le conseil des services d'information a été saisi d'une recommandation plus précise, portant sur la nomina-

tion par le conseil exécutif de porte-paroles officiels au niveau local et sur l'organisation d'un atelier sur les médias à leur intention.

Les collaborateurs provinciaux du Journal, dont la liste paraît en page de titre de la revue, ont été informés d'une autre proposition concernant l'insertion d'une chronique de suggestions utiles, qui pourrait être intitulée "Le coin du praticien".

L'atelier a également suggéré la tenue, auprès des membres, d'un sondage qui les ferait prendre davantage conscience du rôle que joue l'ADC et des services qu'elle leur offre. A cet effet, un questionnaire a été inséré dans le numéro du Journal.

Fluoration: Appui de l'Association médicale canadienne

L'Association médicale canadienne (AMC) accorde tout son appui à l'Association dentaire canadienne dans ses efforts pour promouvoir avec plus de vigueur la fluoration de l'eau au Canada.

Confirmant que la carie dentaire est un des principaux problèmes de santé, l'AMC fait état des recherches scientifiques approfondies, qui ont établi que la fluoration offrait un moyen efficace, sûr et économique de la prévenir.

Elle estime que c'est en gardant le fluor à un degré de concentration optimal dans les approvisionnements d'eau collectifs qu'on assurera la meilleure prévention contre la carie dentaire.

L'Association médicale canadienne se joint à l'ADC pour réclamer une plus grande sensibilisation à la fluoration de l'eau. Les profes-

sionnels de la santé doivent admettre qu'il leur incombe d'éduquer le public en la matière et de participer à toute nouvelle initiative en ce sens.

Récemment, l'Association dentaire canadienne a préconisé la fluoration de l'eau une fois de plus, après avoir fait faire une grande étude de la question.

Présentée en deux volets: "La fluoration de l'eau au Canada, compte rendu de 1980" et "La fluoration de l'eau: Analyse de certaines critiques", l'étude a porté sur les politiques actuelles des provinces, les effets du fluor sur l'environnement et ses effets toxiques, ainsi que sur diverses questions concernant la carcinogénèse, la malformation congénitale, les allergies et la liberté de choix.

L'étude a été menée pour le compte de l'ADC par le Dr Christopher Clark, du Département de la dentis-

terie communautaire de l'Université McGill, et le Dr. W. Paul Lang, de la Division des soins dentaires au Service d'hygiène de la ville de Détroit.

*Le président de l'Association médicale canadienne,
W.D.S. Thomas, m.d.*

L'Association dentaire canadienne
Congrès national de 1981, Calgary, Alberta

30 août au 2 sept.

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«N'ayez pas peur de moi», dit Howie Rocket

Du fond du magasin Towers, au-delà des étagères d'articles ménagers et des paniers d'osier, le grincement de la fraise du dentiste perce par moments la musique douce de Muzak.

Dehors, il pleut. Les acheteurs, qui se promenaient un peu plus tôt sur le mail extérieur du centre commercial en banlieue de Mississauga, déambulent maintenant, au sec et au chaud, entre les étagères de vêtements, de souliers et d'appareils divers.

En attendant que les nuages passent, ils vont prendre un café au restaurant du magasin, s'attardent au comptoir des cosmétiques ou jettent un coup d'oeil au rayon des disques.

Pour le dentiste Howie Rocket, cette affluence signifie qu'à un moment ou l'autre un des promeneurs s'approchera de son comptoir pour demander combien coûte un plombage.

Cela fait un peu plus d'un an que le Dr Rocket a ouvert son cabinet, le "Tridont Dental Centre", au magasin Towers. Depuis ce temps, le magasin a fait plus de 700 000 transactions et chaque jour, le service dentaire a vu passer de 400 à 500 patients possibles devant son comptoir qui donne sur une des allées.

Selon le Dr Rocket, la "boutique du dentiste" offre un mode de prestation des services qui est non seulement rentable, mais qui permet aussi d'appaier les craintes du patient et de le rassurer, tout en contribuant à l'amélioration de la santé buccale des quelque 50 pour cent de la population qui, dit-il, ne se rendent jamais au cabinet du dentiste.

Selon plusieurs de ses collègues toutefois, des boutiques comme le Tridont Dental Centre représentant une menace. Leurs craintes ne portent pas tant sur la mesure dans laquelle le patient pourrait être touché physiquement, mais plutôt sur la mesure dans laquelle la pratique du Dr Rocket

pourrait toucher leur propre pratique de même que la réputation de la profession dentaire en général.

La réussite du Dr Howard Rocket, qui n'a que 33 ans, tient du prodige. Après neuf ans de pratique à son propre cabinet de Mississauga, il a ouvert l'an dernier, avec un collègue de Toronto, le Dr Brian H. Price, sa première boutique de soins dentaires Tridont qu'il a complétée par un service d'urgence accessible sept jours par semaine à partir d'un cabinet de dentiste du nord de Toronto. Le mois dernier, en moins de trois semaines, les deux dentistes ont ouvert trois autres boutiques, deux dans des magasins à rayons de Sudbury et de Toronto et une autre à Mississauga.

Et cela ne fait que commencer, de dire le Dr Rocket, qui compte ouvrir une autre boutique à l'automne dans un autre magasin Towers, à Ottawa cette fois-ci. A plus long terme, il projette d'étendre ses services dans les magasins Woolco, à Calgary, Edmonton, Vancouver et Halifax, ainsi que chez Simpsons à Montréal et Halifax. Il a aussi entrepris des négociations avec La Baie en Ontario.

"Nous nous sommes adressés à tous les grands magasins à rayons du Canada, de dire le Dr Rocket. Nous espérons ouvrir de trois à cinq boutiques par année."

Le reproche le plus constant que les adversaires formulent à l'endroit de ce mode de prestation des services porte sur la qualité des services qui, selon eux, laisseraient à désirer. Ils allèguent que le patient ne voit jamais le même dentiste, que le profit prime sur le professionnalisme et que les directives y sont très terre à terre.

"C'est faux", de répliquer le Dr Rocket.

Exaspéré, il souligne que c'est le Royal College of Dental Surgeons of Ontario qui décerne les certificats aux dentistes qui travaillent pour lui. Il se

demande pourquoi la boutique du dentiste offrirait des services de qualité inférieure à ceux du dentiste qui travaille en pratique privée. Au contraire, il croit rendre service au Collège.

"Aux membres de la profession, je dis: N'ayez pas peur de moi. Je lance dans la pratique les jeunes qui sortent de la faculté et je leur fournis des patients. Je ne fais pas concurrence aux cabinets traditionnels. Au contraire, je les aide. Les patients que je reçois n'ont d'abord pas l'habitude d'aller chez le dentiste. Quatre-vingt pour cent de nos nouveaux patients n'y sont pas allés depuis deux à cinq ans. Alors, n'ayez pas peur."

Le Dr Rocket présente d'autres statistiques. Son premier établissement de Mississauga reçoit quatre ou cinq nouveaux patients par jour, à même l'affluence du magasin, et sa réceptionniste répond à une quinzaine de demandes de renseignements par jour. En outre, 85 pour cent des patients sont convoqués de nouveau et 75 pour cent de ceux qui ont recours au service d'urgence deviennent des patients réguliers.

"J'affiche mes honoraires, ajoute le Dr Rocket. Cela atténue les craintes du patient, même s'il est toujours désagréable d'acquitter les frais. Et comme c'est le cas de la plupart des autres dentistes du pays, nos honoraires ont toujours deux années de retard sur l'inflation. Je n'accorde pas de rabais, ce n'est pas approprié; et je crois demander une rémunération à l'acte qui est raisonnable."

Les patients ne font pas que connaître approximativement le coût des soins dentaires avant même d'avoir vu le dentiste. Les boutiques Tridont leur offrent un autre avantage, l'accès facile aux services. La boutique de Mississauga a les mêmes heures d'affaires que le magasin Towers: de 10 h à 22 h. Elle est donc en mesure d'ac-

Les Actualités



Le Dr Howie Rocket devant sa première "boutique", le "Tridont Dental Centre", dans un magasin à rayons de Mississauga (Ontario). Avec son associé, le Dr Brian H. Price, il compte ouvrir de trois à cinq nouvelles boutiques par année.

cueillir la mère qui travaille, l'adolescent qui étudie, l'ouvrier qui travaille sur les quarts. Il s'agit là d'un avantage réel qui, de l'avis de tous, tenants et adversaires du système, représente un véritable atout pour la boutique du dentiste.

Le Dr Rocket y voit aussi d'autres avantages. L'ambiance familière du magasin à rayons rassure le patient nerveux qui tente d'éviter le dentiste. Face à l'escalade du prix de l'essence, la boutique du dentiste permet de faire plusieurs courses d'un seul déplacement. Et les boutiques Tridont offrent un avantage de plus aux parents, qui peuvent y laisser leurs enfants pen-

dant qu'ils font leur magasinage. Quand le traitement est terminé, les parents sont invités par un petit appareil sonore à venir reprendre leur enfant à la réception.

Toutefois, le Dr Rocket insiste surtout sur le fait qu'une fois passé la réception et la salle d'attente, le patient de la boutique Tridont se retrouve dans un cabinet de professionnel, où il n'y a ni artifices ni bidules mais où seule compte la qualité des soins.

A titre d'exemple, chez Towers à Mississauga, la boutique offre les services de sept dentistes, d'une hygié-

niste, d'un orthodontiste qui travaille à temps partiel et de 12 autres personnes, les assistantes dentaires, les réceptionnistes et la gérante de l'établissement. Il y a deux réleves.

La boutique comprend un cabinet privé de consultation, quatre aires de traitement, deux salles de soins hygiéniques et une salle de réveil pour les patients qui ont subi une anesthésie générale.

L'attrait que la boutique de dentisterie offre à certains patients ne rend pas le Dr Rocket sympathique aux yeux des dentistes qui s'y opposent avec véhémence. Il admet qu'il a dû essayer des "contre-coups terri-

bles" de la part de certains membres de la profession.

"Je ne m'en fais pas pour autant, dit-il. Je sais que je n'offre pas de services à rabais ni à la sauvette. Nous respectons de près les dispositions de la loi et je ne vois pas pourquoi on pourrait penser que nous fassions autrement. Si tel était le cas, le gouvernement aurait vite fait de nous fermer les portes."

La boutique du dentiste semble aussi exercer un certain attrait chez les jeunes dentistes qui, selon le Dr Rocket, lui demandent de plus en plus de renseignements. Comme il le dit lui-même, "le désir de travailler dissipe leurs doutes".

L'organisation qu'offrent les Drs Rocket et Price est simple. Pour établir une boutique Tridont, ils offrent à un dentiste reconnu une participation à l'entreprise dont ils demeurent eux-mêmes propriétaires majoritaires. Les nouveaux diplômés se voient offrir un poste à titre d'associés et, si tout va bien, ils pourront éventuellement acquérir eux aussi une participation. Le Dr Rocket explique qu'une telle organisation permet d'assurer la stabilité de la pratique et encourage les jeunes dentistes à travailler fort. A titre d'associés, ceux-ci reçoivent un pourcentage du revenu brut et le patient se fait suivre par le même dentiste.

Pourquoi Howie Rocket a-t-il abandonné une belle pratique sûre dans un bel arrondissement pour mettre la profession au défi et causer des remous?

"On m'accuse toujours de ne rechercher que le profit, répond-il. Justement, je pourrais faire bien plus d'argent en ayant toujours ma propre pratique.

"J'ai commencé par faire beaucoup de recherches aux Etats-Unis, puis j'ai trouvé une situation semblable ici. Les patients n'allaient pas chez le den-

tiste et le dentiste ne répondait pas aux besoins de la population.

"Auparavant, la profession dentaire n'essayait pas de vendre ses services. Il ne fallait pas recourir aux techniques de la commercialisation. Aujourd'hui cependant, je dis à la profession que, comme elle se fera de toute façon, il vaut mieux aller dans le sens de l'évolution et l'orienter dans la mesure du possible. Informons donc davantage nos patients sur les services dentaires.

"Cela me fait rire quand j'entends les gens dire que je fais de la dentisterie de magasin à rayons. C'est pourtant la même profession. Si le dentiste a son cabinet au-dessus d'une banque, dit-on qu'il fait de la dentisterie bancaire?"

Le Dr Rocket tient également à nier certaines rumeurs qui courent au sujet de son entreprise. Ses dentistes n'ont pas de contingent à satisfaire. Ils ne reçoivent pas de salaire et n'ont pas à investir pour pratiquer à la boutique. Le magasin à rayons ne reçoit aucun pourcentage des revenus; tout ce qu'il perçoit c'est strictement le loyer. Le contrat de location prévoit que le dentiste a accès à la boutique même après l'heure de fermeture du magasin. Le Dr Rocket souligne que les dentistes de Tridont suivent au moins 25 heures par année de cours en formation per-

manente. Et il ajoute que tout patient qui téléphone à la boutique en tout temps pour obtenir des soins d'urgence se voit retourner son appel en moins de 20 minutes. S'il ne peut joindre le dentiste en devoir, le service téléphonique s'adresse au Dr Rocket.

En ce qui a trait à l'évolution future de la dentisterie, le Dr Rocket n'a pas d'opinion précise. Il prévoit l'avènement de la publicité, mais n'aime pas beaucoup ce qui se fait aux Etats-Unis en ce sens. Selon lui, il faudrait des directives sévères. Il est contre la guerre des prix et soutient que le dentiste doit agir en professionnel. Il s'oppose également à la pratique en circuit fermé rémunérée par tête et croit que le dentiste devrait se méfier du franchisage.

Quant à lui-même, Howard Rocket regarde l'avenir avec confiance. Que ses boutiques réussissent ou pas, il a l'intention de continuer à pratiquer l'art dentaire. Evidemment, si elles réussissent, il devra consacrer moins de quatre jours par semaines à l'exercice de la profession, comme il le fait actuellement; mais il est décidé à ne pas abandonner.

"J'ai toujours voulu être dentiste, dit-il, et je vais le demeurer. Mais nous ne pouvons plus faire l'autruche et croire que tout se passe encore comme il y a dix ans."



Le Dr Ron Richardson et son assistante, Anne-Marie Greyerbiehl, à l'oeuvre auprès d'un patient de la "boutique" Tridont. Le Dr Rocket soutient que cette nouvelle présentation des services offre une ouverture aux jeunes dentistes et invite davantage les patients qui, ordinairement, ne prennent pas la peine de se rendre chez le dentiste.

Diriger le changement — le nouveau président de l'ODA

L'Ontario Dental Association continuera de diriger le changement au sein de la profession plutôt que d'attendre qu'il se produise et faire ensuite des mains et des pieds pour s'y adapter.

Tel fut le premier message du Dr Robert Schiewe au moment où il était installé à la présidence de l'association ontarienne, le 26 mai. Il succédait alors au Dr Brad Holmes, de Kenora.

Dentiste de Thunder Bay, le Dr Schiewe a précisé que l'ODA avait déjà confié plusieurs tâches à divers comités chargés de prévoir l'évolution de la profession dentaire et de la diriger.

Les objectifs de l'association portent, entre autres, sur l'évolution des programmes de formation permanente à l'intention des membres, sur les modifications à apporter aux règlements pour mettre en oeuvre les changements administratifs proposés par le comité de réorganisation de l'ODA, et sur l'examen de nouveaux modes de prestation des services.

Le nouveau président a aussi abordé la question des thérapeutes dentaires. S'il s'est fait beaucoup de progrès pour rendre les soins dentaires à la portée de tous, le Dr Schiewe note qu'il y a encore des problèmes dans certains secteurs, notamment chez les autochtones.

C'est le gouvernement fédéral qui, dans certaines régions, forme les thérapeutes dentaires pour répondre aux besoins des autochtones. Selon le Dr Schiewe, les dentistes ne peuvent opposer à ce programme que des objections de principe, à moins que la profession n'assure à ces populations des soins compétents et professionnels.

Il a rappelé que l'ODA faisait de "grands efforts" pour répondre à ces besoins et incité les dentistes à participer à un programme visant à servir les régions éloignées.

"Je crois, dit-il, qu'en employant vos talents à servir pendant deux ou

trois semaines les régions éloignées, vous y trouverez un revigorant et un stimulant qui vous permettront de jeter un regard neuf sur votre propre pratique. Nous avons besoin d'une nombreuse participation pour atteindre les objectifs de l'association."

En ce qui a trait au problème de la main-d'oeuvre dentaire, le Dr Schiewe a souligné la nécessité de trouver les moyens de le résoudre. Il a fait remarquer que, selon une étude que venait de terminer le Dr Don Lewis, si la tendance actuelle se poursuivait, on se retrouverait en 1966 avec quelque 4,3 millions de rendez-vous en trop par manque de patients.

"Cela représente la charge de travail de 1 145 cabinets de dentiste pendant une année, dit-il. Vous voyez donc l'ampleur du problème."

Selon le président de l'ODA, s'il faut réduire le nombre des diplômés en dentisterie et augmenter le pourcentage de la population qui a recours aux soins dentaires, il ne faut pas s'attendre à ce que les nouveaux modes de prestation des services résolvent tous les problèmes.

"L'opinion publique croit que la surabondance des services, quels qu'ils soient, stimule la concurrence des prix et cela est souhaitable du point de vue du consommateur" de noter le Dr Schiewe.

"Je n'admets pas cependant qu'on applique ce principe à la dentisterie, dit-il. Je refuse de croire que la population sera bien servie par une concurrence sans merci chez les membres de la profession dentaire, à moins qu'elle puisse connaître véritablement la nature des services qu'elle demande et qu'elle soit capable d'en évaluer le prix."

Plutôt que de se livrer à la concurrence, les dentistes devraient, selon lui, trouver les moyens d'amener la population à modifier l'idée qu'elle se fait de la santé dentaire et des soins qu'elle doit y apporter.

L'ODA a lancé, à la télévision de Peterborough, une campagne d'annonces qui s'étendra probablement, l'année prochaine, à toute la province. Quoiqu'il s'agisse encore d'un projet pilote, le Dr Schiewe estime que la publicité ne peut qu'attirer plus de gens au cabinet du dentiste.

"C'est à vous et à votre personnel dit-il, d'assurer une communication efficace avec ces patients éventuels et de les inciter à faire prendre soin régulièrement de leurs dents."

Quant au Dr Holmes, il a lui aussi fait état du problème de la main-d'oeuvre dentaire. Il ne croit pas cependant que la "maladie" qui afflige la profession soit attribuable seulement à un surplus de dentistes ou à une rareté de patients.

"Je crois, dit-il, que le malaise existe déjà à l'état endémique dans notre société moderne et urbanisée. Cette maladie, c'est l'égoïsme... Beaucoup trop d'entre nous, dentistes et patients, plaçons nos intérêts économiques au-dessus de l'attention que nous devons porter aux besoins des autres. Beaucoup d'entre nous trouvons normal de penser qu'une chose est bonne en autant qu'elle rapporte.

"... Je vous défie de faire un examen de conscience et de voir quelles sont vos propres normes. En êtes-vous satisfaits, au fond de vous-mêmes? Vos enfants en seraient-ils satisfaits? Dans la négative, je vous en prie, faites quelque chose, aidez-nous à aider le reste de la profession à en faire autant."

Tous deux, les Drs Holmes et Schiewe, ont parlé avec optimisme de l'avenir de la profession et du besoin qu'ont les dentistes et leurs organisations de travailler ensemble. Le Dr Schiewe a insisté pour que les membres de l'Association lui fassent part de leurs préoccupations de façon à être pleinement en mesure de les représenter.

Appel à la participation par le président de l'ADC

Le Dr Gilbert Utas, président de l'Association dentaire canadienne, a demandé aux dentistes de "faire entendre leur voix et de participer activement" aux campagnes en faveur de la fluoruration.

S'adressant au congrès annuel de l'Association dentaire de l'Ontario, le Dr Utas a incité la profession dentaire à faire de son mieux pour plaider cette cause.

Il a rappelé que l'ADC avait réaffirmé sa position concernant la fluoruration des approvisionnements d'eau et publié un imposant rapport sur la question.

S'il incombe à l'Association d'assumer le leadership au sein de la profession, le Dr Utas a rappelé aux dentistes de l'Ontario que leur participation personnelle était tout aussi essentielle.

"Pour vous aider, dit-il, le dossier de l'ADC sur la fluoruration contient aussi un guide sur la façon de mener une campagne au niveau provincial et également au niveau local."

Le président a souligné que la campagne de fluoruration avait reçu "l'appui enthousiaste" de l'Association médicale canadienne et que la Société pédiatrique canadienne avait également offert son appui. La fluoruration a aussi reçu l'appui de toutes les grandes organisations de santé du pays. Enfin, le gouvernement fédéral et l'ADC examinent présentement la possibilité d'organiser un symposium sur la question.

Selon le Dr Utas, les autres défis que doit relever la profession portent sur la main-d'oeuvre dentaire et les tarifs douaniers.

Il a réaffirmé à son auditoire que l'ADC travaillait en étroite collaboration avec les associations provinciales et Santé et bien-être Canada pour résoudre le problème des thérapeutes dentaires.

Dans le passé, ceux-ci recevaient leur formation du gouvernement à

l'école de Fort Smith, dans les territoires du Nord-Ouest. Mais, comme il n'y a plus suffisamment de patients pour y poursuivre la formation des thérapeutes, on se propose de déménager l'école ailleurs.

Le Dr Utas précise que la profession dentaire aimerait établir celle-ci à Yellowknife, mais des études révèlent que le besoin du service des thérapeutes ne serait pas aussi grand qu'on l'avait d'abord pensé.

Devant ce fait, la Direction des services médicaux du gouvernement s'est engagée à réexaminer son programme de formation d'ici trois ans et à fermer l'école si la profession dentaire peut répondre aux besoins des autochtones.

"Notre attention, de dire le Dr Utas, se porte sur la mise au point d'un programme de formation à l'intention d'auxiliaires dentaires qui feraient du travail de prévention et auxquels on pourrait affecter les installations et le personnel qui ont servi aux thérapeutes.

"Les étudiants autochtones et ceux du Grand Nord pourraient ainsi, à titre d'auxiliaires, jouer un rôle très précieux pour éduquer les populations des régions éloignées... Surveillé et agréé par l'Association dentaire cana-

dienne, un tel programme de formation recevrait l'appui de la profession."

Le Dr Utas a fait savoir aussi que les discussions entre la profession et le gouvernement concernant les tarifs douaniers allaient bon train.

Il a précisé que la profession voulait voir rétablir la franchise sur tout le matériel et tous les articles importés au Canada et devant servir à la fabrication de prothèses ou à la chirurgie dentaires.

Le Dr Utas a ajouté que le gouvernement avait entrepris de revoir toute la question, grâce aux instances de la profession et de l'Association, et que Mme Monique Bégin, ministre de la Santé et du Bien-être, avait amorcé une étude des conséquences que les tarifs douaniers auront sur le coût des soins dentaires au pays.

Le président de l'Association a souligné que les membres de la profession devront se serrer les coudes pour relever tous ces défis.

"Rappelez-vous que l'union fait la force, dit-il, et que c'est dans l'unité de la profession que nous relèverons les défis de l'avenir.

La profession, ce n'est pas nous, puis les autres; nous n'avons pas une organisation pyramidale. C'est donc ensemble que nous avancerons."



De gauche à droite, prenant la pause-café au Congrès du printemps de l'ODA, nous apercevons le Dr Claude Doughty, président du Collège royal des chirurgiens dentistes; le Dr Brad Holmes, président sortant de l'ODA; le Dr Donald Williams, président-élu de l'ADC; et le Dr Gilbert Utas, président de l'ADC.

Rayons X: Pour apaiser les craintes des patients

Les dentistes furent les premiers à appliquer des mesures de protection contre la radiation, mais on peut toujours en apprendre davantage.

A l'occasion du congrès annuel de l'Association dentaire de l'Ontario, devant une salle comble, le Dr W. Ross Barlow, de Hamilton, a incité ses collègues et leur personnel à toujours mieux connaître leurs appareils de radiographie.

Soulignant qu'il restait encore beaucoup à apprendre sur les effets de la radiation, le Dr Barlow a souligné qu'il était souvent difficile pour le dentiste de répondre aux questions de ses patients. Les données statistiques actuellement disponibles ne portent que sur les séquelles d'une forte exposition à la radiation.

Si l'on ignore encore les effets des faibles radiations, le Dr Barlow croit que le dentiste peut quand même exposer le problème sous son vrai jour aux patients.

"Il est certain qu'il y a un risque, dit-il. On ne peut le nier. Mais un risque et il en est ainsi dans tout ce que nous faisons."

Dentiste et professeur à temps partiel à l'Université de Toronto, le Dr Barlow a commencé à s'intéresser à la radiation il y a quelques années, lorsque la question a commencé de faire l'objet de critiques défavorables.

Depuis, il a appris que le dentiste pouvait utiliser un grand nombre de mesures préventives.

Le Dr Barlow a d'abord rappelé à ses collègues la variété des dangers que comporte la radiation.

Dans l'immédiat, la radiation intense peut causer un érythème, une rougeur congestive de la peau qui peut dégénérer en dermatite. Le nombre des globules blancs du sang peut s'en trouver diminué, réduisant ainsi la capacité de combattre l'infection et faisant durer la dermatite plus longtemps, dit-il.

La radiation peut aussi entraîner une conjonctivite et même une cataracte, si elle est très intense. Elle peut aussi causer la stérilité et, sur un ton blagueur, le Dr Barlow ne conseille pas à son auditoire de s'en servir pour contrôler les naissances.

Ces séquelles peuvent disparaître en même temps que la radiation, mais le conférencier note que ses moindres effets s'accumulent et s'intensifient d'une radiographie à l'autre.

La radiation a donc des effets différenciés qui représentent une autre catégorie de dangers.

A titre d'exemple, l'érythème peut dégénérer en radionécrose. Le Dr Barlow note que les scientifiques ne peuvent pas encore dire avec certitude si la radiation entraîne la leucémie, mais ils en connaissent d'autres conséquences. Une radiation de 10 rem (r) chez une femme enceinte peut causer une malformation de la structure dentaire du fœtus. La radiation peut avoir d'autres effets génétiques et endommager les tissus en pleine croissance, notamment la glande thyroïde.

"Mais combien d'entre vous ont vu ces choses se produire dans leur cabinet dentaire?" demande-t-il.

Le Dr Barlow souligne que ce sont là les conséquences d'une radiation très intense. Il note que le seul cas qu'il a connu de ce genre a été celui d'un dentiste âgé qui, pendant des années, avait lui-même tenu le film dans la bouche de ses patients pour prendre ses radiographies. Certains d'entre eux finissent par perdre un pouce ou un ongle à cause de la radionécrose.

Le conférencier note que des recherches, faites avec un appareil 70 KV et un film dentaire pour radiographier un plan latéral de dents serrées, avait montré que les tissus visés recevaient 270 millirems ou 270 mr de radiation (1 000 mr = 1 r) lorsque l'appareil était

doté d'un cône tronqué, bordé de plomb.

Il ajoute que les tissus entourant la cible reçoivent 10 mr de radiation et la glande thyroïde, environ 1 mr. Les tissus gonadiques, qui sont situés plus haut que les tissus ovariens, reçoivent entre 0,1 et 0,00045 mr.

Selon le Dr Barlow, les chercheurs en ont conclu qu'une radiation de tout le corps serait de l'ordre de 1 mr.

Et même à cela, il conseille à son auditoire de prendre toutes les précautions voulues.

"Le principe, dit-il, c'est de toujours chercher à réduire l'exposition à la radiation, si faible soit-elle."

Comme mesure supplémentaire, ajoute le conférencier, les dentistes peuvent toujours augmenter le filtre d'aluminium de leur appareil. Il ne faut jamais tenir soi-même le film dans la bouche du patient, dit-il. C'est une habitude dont il est difficile de se défaire, une fois qu'on l'a prise.

Parmi les autres mesures à prendre: utiliser un film rapide qui permet de réduire le temps d'exposition; se tenir à une distance de huit à 10 pieds de l'appareil et, si l'espace ne le permet pas, utiliser un écran de plomb portatif.

"Souvenez-vous, ajoute le Dr Barlow, chaque fois que vous doublez la distance qui vous sépare de la machine, vous réduisez au quart l'exposition. Le résultat est inversement proportionnel à la distance."

Quant à la protection du patient, le dentiste peut l'assurer davantage en s'informant de façon générale du nombre de radiographies qu'il a eues dans le passé. Le conférencier a précisé que personnellement il faisait le moins de radiographies possible chez les femmes enceintes et que, si l'opération offrait des risques pour la glande thyroïde, il recommandait alors d'utiliser un tablier de plomb, ou du moins un collier de plomb.

Restorative Dental Materials

Robert G. Craig, Ph.D., Ed.

*C.V. Mosby Company
St. Louis, Missouri
Sixth edition
478 pages, \$30.75*

This text is described by Dr. Craig as a textbook for the undergraduate dental student. He has divided the subject-matter into 17 separate sections such as; amalgam, gold and its alloys, and direct esthetic restorative materials. He states that the object of the text is to provide the dental student with the fundamental information needed to understand the laboratory and clinical behavior of dental materials.

The first chapter opens the text with a short history of restorative materials from early history to modern times. The next four chapters deal more exclusively with the more fundamental material science topics. He covers some of the physical and mechanical properties of materials and then describes the nature of metals and alloys such as a eutectic.

The next 11 chapters present a description of dental materials, including their composition, reactions, manipulation, properties and the effect of these variables on their properties. The final chapter deals with the biological interaction of materials to the hard and soft tissues. He covers methods of biological testing on cements, restorative materials such as composites, amalgam and gold, and a short evaluation of implants.

The book is well laid out with all chapters itemized. Subjects of interest are easy to find under all chapter headings. I would like to have seen material on acrylic used as temporary crowns with its physical, chemical and biolo-

gic relationship to hard and soft tissues. Very cursory coverage is given to vacuum-formed (polystyrene) acrylic for trays and baseplates. The coverage of plastics for dentures and partials is very thorough. Gold and its alloys are well covered from composition to castings, with an excellent section on alloys for porcelain-metal restorations.

The rapid advance of all phases of dentistry over the last 20 years

makes it imperative that we think like students. Reviews of texts, such as this, will give us more understanding as to how, why and when we should use some of the new products on the market. I think this text would be an excellent adjunct to our office library.

*Reviewed by Dr. J. Ivan Johnston,
West Vancouver, B.C.*

Immunology of Oral Diseases

*Ivan M. Roitt &
Thomas Lehner*

*Blackwell Scientific Publications,
1980
Price \$31.25*

This book is divided into two parts. The first part is a slightly revised version of Ivan Roitt's extremely popular book "Essential Immunology." The second part, less than one-third of the book, is by Thomas Lehner on the "Immunological Aspects of Oral Disease." The format of juxtaposing a large section of sound basic principles on a subject followed by specific discussion of the oral aspects of the same subject is one which other dental textbooks might do well to follow. While the first part of this book can (and does) stand on its own, the second section is markedly enhanced by the preceding section on basic immunology. It is one of the more popular undergraduate texts on the subject, and is now in its second printing of the third edition. It is extremely sound and well written and needs no further eulogy from me.

The second section by Thomas Lehner is, as far as I am aware, one of the first attempts at a text-

book based on the immunologic aspects of oral disease. The area is relatively new and Thomas Lehner has been one of the pioneers in the field. The text has, in areas, become a compilation of the research done by Thomas Lehner's research group at Guys Hospital. This group, which is acknowledged in the preface, has certainly been one of the leading research teams in oral immunology.

The dental undergraduate and graduate student are faced with an ever increasing volume of immunological knowledge. This textbook fills a long-felt need by putting much of that information in one place. The emphasis has been on the immune responses to bacterial plaque, the immunopathogenesis of periodontal disease and the immunology of dental caries. This obviously reflects Lehner's research interests.

The first chapter of Part II gives a very nice review on oral immunity. This is a subject which we often take for granted. The information given in this chapter is fairly superficial, yet adequate for all but the oral immunologist. The next three chapters, one on immunologic responses to bacterial plaque, one on periodontal disease and one on dental caries,

Publications

are probably the most complete. I found the discussion on the immunology of periodontal disease particularly interesting. There are also chapters on the immunology of oral infections and oral manifestations of autoimmunity. These are, of necessity, very superficially treated. For greater depth the student will have to go to current literature. In certain instances, the information given is so brief as to be misleading e.g. with two neutrophilic disorders, chronic granulomatous disease and Chediak Higashi Syndrome.

In view of the fairly extensive literature cited in Part II, I would like to have seen the references keyed to the text. There are certain very interesting statements which I would like to have veri-

fied by reference to the original articles. This was impossible because so many references were given. In addition, when textbooks are cited as references it would be preferable if page numbers were given and the latest edition of a text was used (e.g. "Syndromes of the Head and Neck", by R.J. Gorlin and J.J. Pindborg, was put out as a new edition in 1976 with the addition of a third author M. M. Cohen, Jr.).

In spite of the criticisms above, I think the textbook will be extremely useful to undergraduate and graduate dental students. More especially because it will allow instructors in basic immunology courses to relate their teaching to processes in the oral cavity. The book will also be of

value to recent graduates and dental specialists with research interests. However, for the older graduate who has not been taught the fundamentals of immunology as a didactic course, to pick this book up to "catch up" on immunology is an extremely daunting prospect.

Now that this book is in print, I hope that the authors will find it is successful enough to warrant new editions with extensive updating to include recent advances.

Reviewed by Dr. Bruce Anderson Wright B.D.S., D.D.S., MS. Assistant professor, department of oral biology Dalhousie Dental School, Halifax, Nova Scotia.

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Rodeo party will appeal to everyone

The rodeo party at the CDA Annual Convention promises to be a highlight of the social activities.

On Tuesday, September 1, the color party, representing various provinces, will open the event.

Then the excitement starts, with bareback bronc riding. Action is fast and furious. No stirrups or reins are used, and instead of a saddle, the bronc's back is cinched with a double thick leather pad called a rigging. This rigging has a leather handhold which provides the cowboy with his only means of staying aboard the horse. The rider must stay on the horse until the signal is given, and eight seconds constitutes a ride.

The young cowboys of tomorrow are also featured in the Wild and Woolly event, during which young lads of four, five and six match wits with sheep. The length of their rides is also eight seconds.

Calf roping involves co-ordination between horse and rider racing against the clock.

The cornerstone of the rodeo competition is saddle bronc riding, and riders must try to keep time with the bronc in order to stay with the animal for the standard eight-second ride.

Throughout all the activities, clowns keep the audience amused.

Steer wrestling involves contestants in partnership with a mounted cowboy, called a "hazer". Steers are man-

handled by the horns until they fall to the ground with four legs extended parallel to the ground.

The clowns play a crucial role in the bull riding events, by enticing angry bulls away from a dismounted rider. Riders of these temperamental beasts must ride for eight seconds with only one hand on a rope and one hand in the air.

The ladies get a chance to display their horseback-riding prowess in the ladies barrell racing where they manoeuvre through a cloverleaf pattern of barrells at breakneck speed.

There will be enough exciting events to appeal to everyone at the Calgary Stampede rodeo night.

CDA NATIONAL CONVENTION CLINICAL PROGRAM AUGUST 30 TO SEPTEMBER 2, 1981

MONDAY		TUESDAY			WEDNESDAY			T A B L E C L I N I C S
10:30-11:30 Grieve Memo- rial Lecture (Dr. C. Castaldi)	9:00-12:00 Symposium conts. (Doris J. Stiefel) (Stuart L. Fischman) (Leonard B. Smith) Dentistry for the Handi- capped (cont'd)	9:00-12:00 Current Concepts in Restorative Dentistry for the General Practitioner (Ron Jordan)	9:00-12:00 Managing for Excellence in the Dental Office (Charles Sorenson)	9:00-12:00 Practical View of Crown and Bridge Prin- ciples and their Application in Clinical Dentistry (Harry Gelfant)	9:00-12:00 Surgical Endodontics (Carl E. Hawrish)	9:00-12:00 Stress Management to Physical Activity and Injuries (Ray Kelly)		

LUNCH TWO HOURS

MONDAY			TUESDAY				WEDNESDAY
2:00-5:00 Dentistry for the Handicapped sponsored by The Royal College of Dentists of Canada (Walter J. Loesche) (Saul Kamen) (R.L. Moran) to be continued Tuesday morning	2h00-4h00 What Lies Ahead (Ruben Nelson)	S T U D E N T T A B L E C L I N I C S	2:00-4:00 continued from morning session	2:00-4:00 continued from morning session	2:00-4:00 continued from morning session		

Convention

Spouses activities in Calgary varied

The spouses' program at the CDA annual convention in Calgary August 30 to September 2 offers a wide variety of activities.

The fun begins with a visit to the world famous riding and jumping equestrian complex, Spruce Meadows at 1 p.m. Sunday. This excursion includes a half-hour bus ride through Calgary, and ends with a panoramic view of the Foothills. Buses return at 5 p.m., and shuttle buses will be available from other hotels to the Convention Centre.

A party for the young people (14 and older) starts at 7 p.m.

Jogging tours will begin from the convention centre at 6 a.m. Monday, to be followed at 8 a.m. by a Chuckwagon breakfast for the whole family.

At 10:45 a.m. tours will begin to the Calgary zoo, featuring 1,400 species of animals and birds. There are 45 life-size dinosaurs in Dinosaur Park, two fossil houses, and an aviary conservatory housing rare and exotic birds.

The tour also includes a visit to the planetarium, and Funtier Park (for those two to 12 years old). Golf is available for the adults at several private golf clubs, and transportation will be provided.

A provincial luncheon will be held at noon, and tours continue throughout the afternoon.

The President's dinner and dance will highlight Monday evening's events.

On Tuesday, again for the early risers, there will be jogging at 6 a.m. and tours to Heritage Park and the Glenbow Museum begin at 9:30 a.m.

A fashion show and luncheon at the Pinebrook Golf & Country Club begins at 11 a.m. Tuesday — available only to the first 200 to purchase tickets. Register early. For those unable to obtain these tickets, a lunch-

eon will be held in the Garden Area of the Convention Centre.

Beginning at 4:45 p.m. buses will leave from the various hotels for the Stampede Grounds for a rodeo night dinner and dance with a live band. The dress is Western and buses will return to the hotels between 10:30 p.m. and 12:30 a.m.

Wednesday morning will again feature the 6 a.m. jogging tours, and a

visit to the Devonian Gardens, and shopping.

A hospitality suite will be open to spouses on Sunday from 2 to 4 p.m., Monday from 11:30 a.m. and 2 to 4 p.m.; Tuesday from 9 — 11 a.m. and 2 — 4 p.m. A door prize will be drawn for each day.

Early registrants will also be eligible for a draw for two tickets direct from Calgary to Las Vegas valid until December 31, 1981.

CONVENTION CHAIRMEN



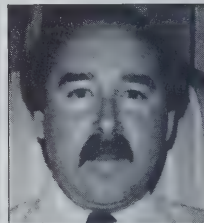
Dr. Jack Derbyshire
Registration



Dr. Michael Gerald
Publicity



Dr. Luc Dugal
Exhibitors



Dr. Phil Greeves
Social

Dentistry for the Disabled

The Royal College of Dentists of Canada will hold a symposium on Dentistry for the Disabled August 31 and September 1 at the CDA annual convention.

The symposium was planned in association with the University of Alberta's Faculty of Dentistry, and received financial assistance from Health and Welfare Canada and the Alberta Heritage Foundation for Medical Research. Papers from the symposium will be published in the October issue of the CDA Journal.

Dr. James H.P. Main of the University of Toronto will act as chairman.

Speakers on Monday afternoon include Dr. Walter J. Loesche, University of Michigan, whose topic will be "A Review of Plaque Control in the Disabled"; Dr. Saul Kamen, Long Island Jewish-Hillside Medical Re-

search Centre on "Medical Retardation and Related Developmental Disorders", and Dr. Roderick L. Moran, Ontario Crippled Children's Centre and the University of Toronto on "Dental Management of the Physically Disabled." Times have been allotted for discussion after each presentation.

On Tuesday, Dr. J.A. Hargreaves of the University of Alberta will be chairman, and speakers include: Dr. Doris J. Stiefel, University of Washington on "The Delivery of Dental Care to the Disabled"; Dr. Stuart L. Fischman, Erie County Medical Centre and State University of New York at Buffalo on "Dental Management of the Medically Disabled Adult"; and Dr. Leonard B. Smith, Alberta Children's Hospital and University of Calgary on "Dental Management of the Medically Disabled Child."

Le programme des épouses

Le congrès annuel de l'ADC, qui aura lieu du 30 août au 2 septembre à Calgary, offre aux épouses un programme des plus variés.

La fête commencera à 13 h le dimanche par une visite du centre de Spruce Meadows, de renommée mondiale. La randonnée comprendra une tournée d'une demi-heure dans la ville de Calgary et se terminera par une excursion panoramique au pied des montagnes. Retour, à 17 h; des autobus feront la navette entre les hôtels et le centre des congrès.

La soirée pour les jeunes (les plus de 14 ans) commencera à 19 h.

Lundi matin, à 6 h, jogging à partir du centre des congrès. L'exercice sera suivi, à 8 h, du petit déjeuner Chuckwagon pour toute la famille.

A 10 h 45, visite du zoo de Calgary, qui comprend 1400 espèces d'animaux et d'oiseaux, un Parc des dinosaures avec 45 animaux préhistoriques grosseur nature, deux collections de fossiles et une volière d'oiseaux rares et exotiques.

La randonnée comprendra également une visite du planétarium et du parc Frontier (pour les jeunes de deux à 12 ans). Les amateurs de golf auront un choix de clubs privés, où ils pourront se faire véhiculer.

Les visites se poursuivront dans l'après-midi, après le déjeuner offert, à midi, par la province.

La soirée du lundi sera consacrée au dîner du président, qui sera suivi d'une danse.

Mardi matin, les lève tôt pourront faire leur jogging dès 6 h. La visite au parc Héritage et au musée Glenboe commencera à 9 h 30.

A 11 h, au Pinebrook Golf & Country Club, il y aura une parade de mode suivie du déjeuner. Il n'y aura de la place que pour 200 personnes; achetez vos billets d'avance. Pour ceux qui ne pourront pas y assister, le déjeuner sera servi au Jardin du centre des congrès.

A compter de 16 h 45, des autobus vous transporteront des divers hôtels au terrain du Stampede où se déroule

le dîner rodéo suivi d'une danse avec orchestre. Tenue western. Les autobus vous ramèneront à l'hôtel entre 22 h 30 et 0 h 30.

Mercredi matin, jogging dès 6 h. Puis, visite des jardins Devonian etc. . . magasinage.

Un salon d'accueil sera mis à la disposition des épouses aux heures suivantes: le dimanche, de 14 h à 16 h; le lundi, de 9 h à 11 h 30 et de 14 h à 16 h; le mardi, de 9 h à 11 h et de 14 h à 16 h. Il y aura tirage d'un prix de présence chaque jour.

Les premières inscrites participeront au tirage d'un voyage pour deux, de Calgary à Las Vegas, dont les billets seront valides jusqu'au 31 décembre 1981.

Le point tournant de cette compétition est la course en selle sur un bronco qui cherche continuellement à faire tomber son homme pendant les huit secondes que dure la course.

Des bouffons amusent les spectateurs pendant toute la durée de la représentation.

Le combat contre de jeunes taureaux s'effectue conjointement par un cowboy appelé "hazer" et des combattants qui cherchent à retenir le taureau par les cornes et l'étendre par terre, les quatre pattes parallèles au sol.

Un autre rôle très important des bouffons dans le spectacle, est qu'ils contribuent à éloigner les taureaux furieux des combattants en détresse. On peut voir les cowboys se tenant sur le dos de ces bêtes sauvages, une main sur le cable et l'autre main dans les airs.

Les dames ont la chance de démontrer leur adresse en équitation en prenant part à une course vertigineuse sur un trajet conçu en forme de trèfle.

La soirée du rodéo au Stampede de Calgary est un événement à ne pas manquer.

Du plaisir pour tous au rodéo

Le spectacle du rodéo au Congrès annuel de l'ADC promet d'être le clou des activités sociales.

L'évènement commencera mardi le 1^{er} septembre par une représentation haute en couleurs dans laquelle participeront plusieurs provinces.

L'excitation est à son comble quand on monte sur les dos nus de chevaux sauvages. Tout se déroule à une vitesse folle et vertigineuse. On ne peut se servir ni de rênes ni d'étriers, et au lieu d'une selle, une double épaisseur de cuir appelée "rigging" sert de seul moyen au cowboy pour se

tenir sur son cheval. Le cavalier doit demeurer sur sa monture au signal donné, et la course dure huit secondes.

Les jeunes cowboys de demain, âgés de quatre, cinq et six ans, montent "à cheval" sur des moutons. C'est un spectacle plus "chaud" que le premier, même si la durée de la course est la même; vous l'avez deviné, c'est à cause de la laine, mais voyons donc!

Pour ce qui est d'attraper le veau, ce spectacle demande beaucoup de coordination entre le cheval et l'écuyer qui participent à une course contre la montre.

Symposium sur les soins aux handicapés

Le Collège royal des dentistes du Canada tiendra, les 31 août et 1^{er} septembre à l'occasion du congrès annuel de l'ADC, un symposium sur les soins dentaires aux handicapés.

L'événement est organisé avec la participation de la Faculté dentaire de l'Université d'Alberta et subventionné par Santé et Bien-être Canada et par la fondation Alberta Heritage pour la recherche médicale. Les actes du symposium seront publiés dans le numéro d'octobre du Journal de l'ADC.

Le Dr James H.P. Main, de l'Uni-

versité de Toronto, en assumera la présidence.

Le lundi après-midi, les conférenciers seront: le Dr Walter J. Loesche, de l'Université du Michigan, qui traitera du contrôle de la plaque dentaire chez les handicapés; le Dr Saul Kamen, du Long Island Jewish-Hillside Medical Research Centre, qui parlera de l'arriération mentale et des troubles du développement; le Dr Roderick L. Moran, de l'Ontario Crippled Children's Centre et de l'Université de Toronto, qui traitera l'entretien des dents chez les handicapés physiques.

Le mardi, la séance sera présidée par le Dr J.A. Hargreaves, de l'Université d'Alberta, et les conférenciers seront: le Dr Doris J. Stiefel, de l'Université de Washington, qui traitera des soins dentaires aux handicapés; le Dr Stuart L. Fischman, du Erie County Medical Centre et de l'Université de l'Etat de New York à Buffalo, qui parlera de l'entretien des dents chez les malades adultes; le Dr Leonard B. Smith, de l'Alberta Children's Hospital et de l'Université de Calgary, qui traitera de l'entretien des dents chez les enfants malades.

PROGRAMME CLINIQUE DU CONGRÈS NATIONAL DE L'ADC DU 30 AOÛT AU 2 SEPTEMBRE 1981

LUNDI		MARDI				MERCREDI			
10h30-11h30 Conférence Grieve Memorial (Dr. C. Castaldi)		9h00-12h00 Symposium (suite) (Doris J. Stiefel) (Stuart L. Fischman) (Leonard B. Smith) Dentisterie pour les handicapés (cont'd)	9h00-12h00 Principes actuels en dentisterie restaurative pour le prati- cien général (Ron Jordan)	9h00-12h00 Comment atteindre l'excellence dans la gestion d'un cabinet dentaire (Charles Sorenson)	9h00-12h00 Aperçus pratiques sur les couronnes et bridges; leur application en dentisterie clinique Harry Gelfant)	9h00-12h00 Endodontie chirurgicale (Carl E. Hawrish)	9h00-12h00 Gestion du stress en rap- port avec l'acti- vité physique et les blessures (Ray Kelly)	CONFÉRENCES CLINIQUES	
DÉJEUNER: 12h00 à 14h00									
LUNDI		MARDI				MERCREDI			
2h00-5h00 Dentisterie pour les handi- capés, présen- tation com- manditée par le Collège royal des dentistes du Canada suite mardi matin	2h00-5h00 Ce qui nous attend (Ruben Nelson)	CONFÉRENCES CLINIQUES POUR LES ÉTUDIANTS		2h00-4h00 Suite de la séance du matin	2h00-4h00 Suite de la séance du matin	2h00-4h00 Suite de la séance du matin			

du 30 août au
2 septembre 1981
Calgary (Alberta)

National Convention

Canadian Dental Association

Congrès National

Association dentaire canadienne

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Inscrivez-vous avant le 1^{er} juillet
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Un reçu global sera envoyé à l'adresse ci-dessus, à moins que vous ne préfériez des reçus individuels (en ce cas, reproduisez le présent formulaire et envoyez autant d'inscriptions qu'il le faut).

FONCTION: A la suite de votre nom, indiquez votre fonction principale au sein de l'ADC, de l'ACHD ou de l'ACGMAD (exemples: membre, président de la Division de prosthodontie, président du Conseil de l'éducation, etc.).

DENTISTES: Nom (à inscrire sur votre insigne) _____ FONCTION: _____
Membres de l'ADC et dentistes étrangers: 175 \$ avant le 1^{er} juillet 1981, ou 200 \$ après.
Canadiens non membres: 225 \$ avant le 1^{er} juillet 1981, ou 250 \$ après.

\$ _____

Privilegès: Séances de travail; exposition; cérémonie d'ouverture le dimanche; petit déjeuner "chuck wagon" et déjeuner "Installation" le lundi; déjeuner, dîner-barbecue, rodéo et danse le mardi.

HYGIÉNISTES DENTAIRE: Nom (à inscrire sur e'insigne) _____ FONCTION: _____
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Non membres: 190 \$ avant le 1^{er} juillet 1981, ou 200 \$ après (ne concerne pas les hygiénistes étrangers qui ont leur propre association).

\$ _____

Privilegès: Séances de travail, exposition, un petit déjeuner continental et deux déjeûners, un dîner-barbecue, rodéo et danse.

TECHNICIENS DENTAIRE: Nom (à inscrire sur e'insigne) _____ FONCTION: _____
80 \$

\$ _____

EXPOSANTS: Nom (à inscrire sur l'insigne) _____

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GARDE-MALADES ET ASSISTANTS(ES) DENTAIRE: Nom (à inscrire sur l'insigne) _____ FONCTION: _____
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Non membres: 100 \$ avant le 1^{er} juillet 1981, ou 110 \$ après.

\$ _____

Privilegès: Sessions de travail; exposition; cérémonie d'ouverture le dimanche; petit déjeuner "chuck wagon" et, moyennant 5 \$ supplémentaires, dîner-théâtre en soirée le lundi; déjeuner, dîner-barbecue, rodéo et danse le mardi.

CONJOINTS: (autres que dentistes et assistants) Nom (à inscrire sur l'insigne) _____
75 \$ avant le 1^{er} juillet 1981, ou 90 \$ après.

\$ _____

Privilegès: Séances de travail; exposition; cérémonie d'ouverture le dimanche; petit déjeuner "chuck wagon" et déjeuner-parade de mode le lundi; déjeuner, visite organisée, dîner-barbecue, rodéo et danse le mardi.

Lundi, en soirée, dîner et bal du président: 45 \$ le couple.

\$ _____

Mardi, en soirée, dîner-barbecue, rodéo et danse: billets supplémentaires, 30 \$ chacun.

\$ _____

ANNULATIONS: Remboursement entier des frais d'inscription, avant le 1^{er} juillet 1981; après quoi, il y aura une retenue de 75%.

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Calgary, Alberta, T2G 0P5 - Telephone: 1 (403) 261-5877.

TOTAL \$ _____

August 30 to
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ROLE: Please indicate your principal role in CDA, CDHA, CDNAA, e.g., Member, President of Prosthodontic Section, Chairman of Council on Education, etc., after your name.

DENTISTS: Name (For name tag) _____ **ROLE** _____
CDA Member & Foreign Dentists \$175.00 before or \$200.00 after July 1, 1981
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\$ _____

INCLUDES: Scientific Sessions, Exhibits, Sunday opening ceremonies, Monday Morning Chuck Wagon Breakfast, Installation Luncheon, Tuesday Luncheon and evening Bar-B-Que, Rodeo and Dance.

DENTAL HYGIENISTS: Name (For name tag) _____ **ROLE** _____
CDHA Member \$95.00 before or \$115.00 after July 1, 1981
Non-CDHA Member \$190.00 before or \$200.00 after July 1, 1981 (does not apply to Non-Canadian Hygienists who belong to their own Association)

\$ _____

INCLUDES: Scientific Sessions, Exhibits, two Luncheons and one Continental Breakfast, Bar-B-Que, Rodeo and Dance.

DENTAL TECHNICIANS: Name (For name tag) _____ **ROLE** _____
\$80.00

\$ _____

EXHIBITORS: Name (For name tag) _____

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DENTAL NURSES AND ASSISTANTS: Name (For name tag) _____ **ROLE** _____
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Non-Member \$100.00 before or \$110.00 after July 1, 1981.

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INCLUDES: Scientific Sessions, Exhibits, Sunday opening Ceremonies, Monday Morning Chuckwagon Breakfast (optional for \$5.00) Monday Night Dinner Theatre, Tuesday Luncheon and evening Bar-B-Que, Rodeo and Dance.

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\$75.00 before or \$90.00 after July 1, 1981.

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INCLUDES: Scientific Sessions, Exhibits, Sunday opening Ceremonies, Monday Morning Chuckwagon Breakfast, Fashion Show Luncheon, Tuesday Luncheon and Sightseeing Tours and evening Bar-B-Que, Rodeo and Dancing.

Monday night President's Dinner and Dance \$45.00 per couple

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Tuesday night Bar-B-Que, Rodeo and Dance, additional
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CANCELLATION: Full registration fee refundable up to July 1, 1981.
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August 30 to
September 2, 1981
Calgary, Alberta

National Convention

Canadian Dental Association

Congrès National

Association dentaire canadienne

du 30 août au
2 septembre 1981
Calgary (Alberta)

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No. of Adults _____ Children _____ in room.

Nombres d'adultes _____ d'enfants _____ par chambre.

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Hygienist	☐	Hygiéniste	☐
Assistant	☐	Assistant(e)	☐
Technician	☐	Technicien(ne)	☐
Exhibitor	☐	Exposant	☐

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Do you wish your reservation guaranteed? Yes _____ No _____ Unless guaranteed, reservation will only be held until 6 p.m. Room allocation will be made only to convention registrants. Advance payment will be required upon receipt of confirmation. Do not enclose accommodation payment with this form. Do not include accommodation payment in registration cheque.

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	Simple	Double	Triple	Code
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DEADLINE FOR MAKING ADVANCE RESERVATIONS: July 1, 1981
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Fluoride content of surface enamel of Eskimo (Inuit) teeth

M.E.J. Curzon, LDS, BDS, MS, PhD

Jane Baer, BA

Rochester, N.Y.

M.A. Levesque, DDS

Frobisher Bay, N.W.T.

ABSTRACT

Surface enamel fluoride analyses of 81 Baffin Island Eskimo teeth gave a mean concentration of 1,293 $\mu\text{g/g}$ with a range of 450 to 4,510 $\mu\text{g/g}$. There appeared to be less fluoride in older teeth with an age-fluoride concentration of -0.64. No increase in enamel fluoride was seen in teeth from a fluoridated community.

Dental caries in the Eskimo has reached epidemic proportions,¹ and this change in disease pattern has been of recent origin, and associated with increasing aculturation.² Previous authors^{3,4} have reported on fluoride concentrations found in surface enamel, and in some instances attempts have been made to relate these concentrations to dental caries.^{3,5-8} In the Eskimo, the exposure to environmental fluoride has been limited to the eating of sea fish, usually during the summer months. The use of artificial fluoridation of the drinking water in an Arctic community afforded the opportunity to compare uptakes of fluoride by surface enamel from fluoridated drinking water, with uptakes in non-fluoridated villages.

MATERIALS AND METHODS

Extracted permanent teeth were collected between 1977 and 1979 by one of us (M.A.L.) in several communities on Baffin Island (Northwest Territories, Canada). Teeth were sent to the Eastman Dental Center, using special mailers designed for this purpose, together with information for each tooth donor as to age, sex, and settlement of origin. Teeth were collected from 10 settlements for which dental caries prevalence data had been reported previously.¹

Upon receipt, all teeth were catalogued and individually stored in vials under refrigeration with several drops of

those teeth unsuitable for acid etch analysis (insufficient sound enamel or deep cracks in the enamel surface), 81 teeth (out of 96 collected) were used for this study. Some of the teeth from the older Eskimos were coated with a thick layer of dark brown plaque/pellicle and heavily stained with nicotine. This was removed by polishing with a slurry of silicon carbide in distilled deionized water. For the short time used, our studies have shown that very little enamel is removed. In the older teeth, after polishing, the enamel is still darkly stained, indicating that most of the surface is intact. This is obviously not a perfect procedure, but our studies using regular prophylactic paste, pumice, cerium oxide, silicon carbide, protein solvents, weak acids or chlorox have shown the least damage to the surface enamel with the silicon carbide or cerium oxide. The former is cheaper and more easily obtained.

Acid etch analyses on all teeth for fluoride, as well as for calcium (for enamel weight), were carried out using the method of Spector and Curzon.⁹ Two successive etches were taken on each tooth to give concentrations of fluoride at two depths. All etches were on buccal surfaces. Fluoride was analysed by specific ion electrode after addition of TISAB to a small aliquot of the etchant solution.

RESULTS

Of the 81 teeth used, the largest single group came from the main village of Frobisher Bay (36 teeth), the administrative centre of Baffin Island. The remaining 45 samples came from eight other villages. Results for the fluoride analyses are given in **Table 1**. Where appropriate, fluoride concentrations have been given by settlements.

The mean depths of etch were approximately 19 μm for the first etch, and 28 μm for the second. Mean fluoride concentrations were 1,283 $\mu\text{g/g}$ and 742 $\mu\text{g/g}$ respectively. The range of fluoride concentrations (1st etch) was 450 —

4,510 $\mu\text{g/g}$.

The mean age of the tooth donors was 39.0 years, but the spread of ages by settlements varied considerably. The mean age of Iglookik tooth donors was significantly older than those of Frobisher Bay, although the fluoride concentrations in the surface enamel were lower.

DISCUSSION

Our findings showed considerable variation in fluoride concentrations between teeth of different age groups and locations. All settlements on Baffin Island are situated on the coast with good access to sea fish (usually Arctic char), and sea mammals (seal and walrus). In recent years, however, the Eskimo diet has relied less on traditional foods, and more on imported foods from the south. Thus, a change in fluoride intake would be expected.

There appeared to be markedly higher fluoride concentrations in the younger donors, indicating an age effect. This was tested by a statistical analysis by linear regression of fluoride concentration versus age for the Frobisher Bay teeth and gave a correlation co-efficient of -0.64. Similarly, the Iglookik data gave a correlation of -0.35 for a group of much older tooth donors.

The use of topical fluorides has been part of the dental services provided in Baffin Island since 1970, and this may well account for the higher fluorides in the younger teeth. Another factor associated with lower fluoride concentration in older teeth is that of wear. Heavy wear of tooth enamel is characteristic of the Eskimo dentition, and particularly of older Eskimos raised in the traditional way of life. Living on a coarse diet, teeth were worn down at a rate not seen in modern European dentitions.¹⁰

By comparison with previous surface enamel analyses completed by us,³ the concentrations of fluoride in the Eskimo teeth (mean = 1,283 $\mu\text{g/g}$) were similar to those found in teeth collected from communities in the United States, with 1.0 mg/l of fluoride in their water supplies

(mean = 1,169 $\mu\text{g/g}$). Nevertheless, the mean age of the latter teeth was considerably lower (25 years) than the Eskimo teeth (39 years), emphasizing the high fluoride concentrations in the Eskimo teeth, assuming loss of fluoride with age as shown in our study.

Although Frobisher Bay has used fluoridated water since 1965, only a slightly higher fluoride concentration was found in those teeth compared with other settlements. This was expected as only Eskimos less than 25 years of age would have erupted any permanent teeth after the commencement of fluoridation. In our sample there were nine teeth in this category with a mean fluoride concentration of 1,201 $\mu\text{g/g}$. With an apparent loss of surface enamel fluoride with age, one would have expected the teeth of younger Frobisher Bay inhabitants to have had more fluoride and not less, if the drinking water had any effect. It would appear that the use of fluoridation has not had any appreciable effect upon fluoride enamel concentrations beyond that normally acquired through the Eskimo diet.

An additional factor to consider may be the way drinking water is used in Frobisher Bay. Two systems were in effect during the period of tooth collection. A piped system delivered water from the treatment plant to a small proportion of the settlement,¹¹ while the majority of the houses received a delivery of water by truck, the frequency of which depended upon usage. It was our personal experience that the Eskimo families did not receive as frequent a delivery as Caucasian families, and it was known that many older Eskimos still preferred to cut, and then melt, ice for their water. This traditional habit could well have lowered the exposure of teeth to fluoridation.

Despite the high levels of fluoride in the surface enamel of the Eskimo teeth, the incidence of dental caries in Baffin Island is very high.¹ This has become a serious health problem, with extensive destruction of the

Table 1
Fluoride Concentrations in Surface Enamel
of Baffin Island Eskimo Teeth

Group	n	Mean Age* Yrs. S.E.	Mean Conc. $\mu\text{g/g} \pm \text{S.E.}$	
			1st Etch	2nd Etch
All Samples	81	39 $\pm$ 2.8	1,283 $\pm$ 114	742 $\pm$ 80
Frobisher Bay	36	33 $\pm$ 2.3	1,831 $\pm$ 251	947 $\pm$ 101
Iglookik	17	51 $\pm$ 3.4	561 $\pm$ 114	386 $\pm$ 191
Lake Harbour	15	25 $\pm$ 3.4	1,373 $\pm$ 427	1,005 $\pm$ 277
Pangnirtung	4	42 $\pm$ 5.6	1,102 $\pm$ 147	815 $\pm$ 192
Others**	9	40 $\pm$ 4.1	1,016 $\pm$ 132	507 $\pm$ 38

** Pond Inlet (1), Arctic Bay (3), Grise Fjord (2), Broughton Island (2), Clyde River (1).

* Mean age of tooth donors at time of tooth extraction.

dentitions. It would appear that the dietary challenge for the Eskimo dentition is too great for the fluoride presently available to reduce the caries incidence. It is suggested that much greater use of preventive agents is required to combat the cariogenic challenge to the Eskimo teeth. Fluoridation of school water supplies, or the use of weekly/daily fluoride mouth-rinses would be useful measures.

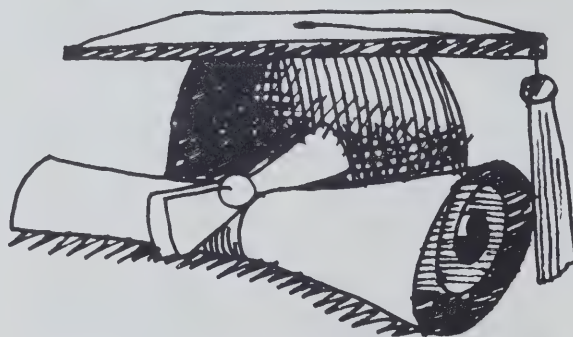
REFERENCES

- 1 Curzon, M.E.J. and Curzon, J.A. Dental caries prevalence in the Baffin Island Eskimo. *Pediat Dent*. In press.
- 2 Schaeffer, O. When the Eskimo comes to town. *Nutrition Today* 6:8, 1971.
- 3 Spector, P.C. and Curzon, M.E.J. Surface enamel fluoride and strontium in relation to caries prevalence in man. *Caries Res* 13:227, 1979.
- 4 Hallsworth, A.S. and Weatherall, J.A. The micro-distribution, uptake and loss of fluoride in human enamel. *Caries Res* 3:109, 1969.
- 5 Englander, H.R. and Mellberg, J.R. Failure to demonstrate an association between F concentration and dental caries in the deciduous dentition. *J Dent Res* 55:707, 1976.
- 6 DePaola, P.F., Brudevold, F., Aasenden, R et al. A pilot study of the relationship between caries experience and surface enamel fluoride in man. *Arch Oral Biol* 20:859, 1975.
- 7 Poulsen, S. and Larsen, M.J. Dental caries in relation to fluoride content of enamel in the primary dentition. *Caries Res* 9:59, 1975.
- 8 Merwe, E.H.M. van der, Bischoff, J.I., Fatti, L.P. et al. Relationships between fluoride in enamel DMFT index and fluorosis in high-and low-fluoride areas in South Africa. *Community Dent Oral Epidemiol* 5:61, 1977.
- 9 Spector, P.C. and Curzon, E.J. Relationship of strontium in drinking water and surface enamel. *J Dent Res* 57:55, 1978.
- 10 Curzon, M.E.J. Dental disease in Eskimo skulls in British Museums. *OSSA* 3/4:83, 1978.
- 11 Heinke, G.W. and Deans, B. Water supply and waste disposal systems for Arctic communities. *Arctic* 26:149, 1973.

Dr. Curzon is chairman, Department of Caries Research, Eastman Dental Center, Rochester, N.Y.; **Jane Baer** is a research assistant.

Dr. Levesque is zone dental officer, Department of National Health and Welfare, Government of Canada, Frobisher Bay, N.W.T.

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Periodontosis

Part III : Barbados Study

R.F. Harvey, D.D.S., F.R.C.D.(C), F.A.C.D., F.I.C.D.

W.B. Jones, L.D.S. (Liverpool), F.D.S., R.C.S. (Eng.).

E.C.S. Chan, B.A., M.A., Ph.D.

J. deVries, B.A., M.D.C.M.

H. Wilika, B. Sc.

ABSTRACT

Fourteen cases of periodontosis were studied in Barbados during a five-week period; these were classified as Class I - 9 Cases; Class II-4; and Class III-1. Bacterial plaque samples were obtained and studied using the fluorescence technique to record the incidence of *Bacteroides melaninogenicus* and spirochetes. All patients were provided with Spiramycin following examination. Radiographic and clinical evidence support the view expressed in Parts I and II that periodontosis is a recognizable disease quite distinct from periodontitis. There appears to be an association between the classes of periodontitis, the involvement of specific teeth and spirochetal organisms present. All patients exhibited improvement within one to four weeks and again five months later clinically and radiographically, supported by photographic evidence. Spirochetes were eliminated from healthy and diseased sites following antibiotic therapy although there was some return in five months in the diseased sites. The antibiotic effect on the occurrence of *B. melaninogenicus* was inconclusive.

INTRODUCTION

The usual systems of scoring the incidence of periodontal disease rely on the Russel¹, Ramfjord² or similar indices³ and note mainly the prevalence and severity of gingivitis and/or periodontitis; little information is, however, available regarding the incidence of periodontosis.

One study by Kaslick and Chasens⁴ involving young men entering the army of the United States was carried out over a two-year period and 27 cases of "periodontosis with periodontitis" were reported: the age range was from 19 to 27; 16 of the 27 cases were found in blacks (59 per cent), 12 were from the southern part of the United States and 11 additional ones from the southwest (85 per cent);

they also noted the fact that blacks appeared to have more severe bone loss than did Caucasians which would appear to confirm the findings previously reported by Kelly and Van Kirk⁵, as well as those of Belting, et al⁶ who found greater incidence amongst blacks.

Based on personal experience (RFH) including several previous visits to Barbados and the above information, it was felt that periodontosis could be more common amongst non-Caucasians, and possibly more prevalent in climates warmer than in the northern parts of North America. With the permission of Ms. Billie Millar, Minister of Health of Barbados and Dr. Leonore Harney, Senior Medical Officer, the Senior Dental Officer, Dr. Winthrop Jones* agreed to seek out such cases for study. A letter was circulated amongst the dentists of Barbados requesting referral of any suspicious cases to the Enmore Health Centre where the study was to be undertaken. The letter suggested that patients between the ages of about 10 and 30 who had pockets of more than four millimetres about the anterior teeth and/or more than five millimetres about the first molars, especially in apparently plaque-free mouths could be possible candidates. The Dental Hygienists and Dental Auxiliaries of the School Dental System were also advised of the project and their assistance requested. Nineteen patients were referred for study during a five-week period (November — December, 1979), 14 by members of the dental profession and five by the School Dental Service. (See Table 1.).

MATERIALS AND METHODS

Patients were screened with bite-wing and occasional anterior radiographs; whilst the latter were being processed, all pertinent medical and dental history was recorded. This included age, sex, racial origin, medical history, onset of puberty, past and present illnesses, past

* Present Address: Winthrop B. Jones, L.D.S. (Liverpool), F.D.S., R.C.S. (Eng.), The Cripps Health Centre, University of Nottingham, University Park, Nottingham, England.

Table 1
Classification of 19 Patients Examined

Racial Origin:

- All patients studied were Black
- Two patients were born in Antigua
- Seventeen were born in Barbados

	Total	Female:Male
Periodontosis*	14	11:3
Class I	9	7:2
Class II	4	3:1
Class III	1	1:0
Periodontosis — Adult Onset (Rapidly Advancing or Destructive Periodontitis)	1	1:0
Periodontitis	2	2:0
Gingivitis	2	2:0
Total	19	16:3

*In Periodontosis Part II, Periodontosis is defined as a disease of young adults characterized by severe and rapid destruction of the periodontium; three classes are recognized:

Class I: In the classic case of periodontosis, one to four of the first permanent molars and any or all of the anterior teeth may be involved. In the early stages, minimal smooth surface caries activity may be observed with minimal or no calculus (salivary or serumal) present. The first molar lesion may "spread" to involve the distal of the second bicuspid and/or mesial of the second molar.

Class II: As with Class I, plus involvement of cuspids and first bicuspid.

Class III: Includes clinical patterns which do not fit into the first two classes; e.g., "generalized" forms exhibiting horizontal bone loss yet with apparant mandibular bicuspid resistance, and cases of isolated anterior lesions without apparent clinical involvement of first molars.

and present prescriptions for antibiotics, dental history and generally, all anamnestic data pertinent to the investigation.

With the preceding information and x-rays available, a more detailed examination was performed, further radiographs and color photographs were taken as required, and the patient categorized according to the presence of gingivitis, periodontitis or periodontosis; the latter were later sub-classified (according to the criteria as laid down in Periodontosis — part II) into Class I, II or III; one Periodontosis — Adult Onset (Rapidly Destructive or Advancing Periodontitis) case was also studied. Due to the limitations of the study no healthy patients were seen to act as controls. Plaque samples were obtained as indicated below for study of the incidence of *Bacteroides melaninogenicus* and spirochetes as these organisms are suspected as being associated with the disease^{7,8}. Spiramycin in varying doses as described later, was provided for each patient.

Two sites were selected for study from each patient, one healthy and one diseased. The healthy site was usually the mesio-labial of a maxillary first bicuspid (except in the

Class II and Class III cases) and the diseased site, a first permanent molar. The area was isolated and the supra-gingival plaque removed with a sterile curette; the area was then air-dried and sub-gingival plaque samples from the base of the crevice removed from the tooth with several "swipes" of a sterile curette; these specimens were immediately placed in 1 millilitre of sterile normal saline and thoroughly agitated. As soon as possible (usually within 10-15 minutes, but never more than 45 minutes later) healthy and diseased specimens were placed on each slide, with three such slides being prepared; these were air-dried and heat-fixed. Using the Fluoretec M Kit,* fluorescence and dark-field microscopy studies were undertaken.⁸ Of the first 12 cases, one sample was studied in Barbados, one was mailed to McGill University for study by the Department of Microbiology and Immunology, and one spare slide was transported back by one of us on completion of the project. For cases 13-19 only two samples of each were taken and both were transported back to McGill University.

Ten of the periodontosis patients and the one Adult-

* Fluoretec M Kit, Provided by Pfizer Inc., N.Y.

Onset patient were again seen immediately prior to returning to Canada — varying from seven to 28 days following the original examination. Photographs were again taken and plaque samples obtained from each diseased site and transported to McGill University. A second visit occurred from April 10-24 — four to five months after the original examinations. At that time, with three exceptions, all the original periodontitis patients were re-examined, re-x-rayed, and re-photographed. New plaque samples were obtained from the original healthy and diseased sites and transported to McGill for microbiological studies.

Therapy

All 14 cases of periodontitis were provided with the antibiotic Spiramycin*.

Spiramycin was selected as the antibiotic of choice as previous experience indicates that it will arrest periodontitis (and periodontitis), is secreted in the saliva and crevicular fluid and is retained in bone for prolonged periods.^{9,10,11,12,13}

Dosage was 500mg. T.I.D. for five days followed by 500mg. B.I.D. for a further five days with the exception of patients B-17 and B-19 as in the opinion of the writer, a lower dose of 500mg. T.I.D. for three days followed by 500mg. B.I.D. for a further four days would be sufficient. Case B-9, an Adult Onset Periodontitis was prescribed Spiramycin at 500mg. T.I.D. and Metronidazole** 250mg. Q.I.D. for five days.

Side Effects: None. Although reported in the literature that severe side effects may be encountered with Spiramycin, experience of one of us (RFH) indicates that only a very small per cent of patients suffer from diarrhea and similar complaints (to be published). With one exception, none of the 19 patients prescribed the antibiotic during these experiments complained of any side effects; the one exception being a patient who blamed the antibiotic for coming down with a cold on the last day of taking the prescription!

RESULTS AND DISCUSSION

Seven to 28 days following the start of the antibiotic, 11 patients were re-examined and one patient telephoned. Ten of 12 felt remarkably better. Changes reported included: "cessation of all pain... able to eat comfortably... mouth feels cleaner". One case felt "better" only whilst on the antibiotic, whilst the other felt no difference.

Clinical impressions of the two examiners, however, were that all 11 cases seen appeared better. (**Plates 1 and 2**). Patients B-4, B-5 and B-7 had received curettage* of involved sites in the interval but the remaining nine cases had received no other therapy.

Five months later 12 of the 14 cases of periodontitis and the one Adult Onset case were re-examined clinically and radiographically and all appeared better in the opinion of both examiners. (One exception was the mesial of tooth Number 46, Patient B-4, which clinically appeared to show evidence of necrosis although the radiograph indicated improvement. Further Spiramycin and curettage therapy was recommended.

Additional therapy: This varied considerably from case to case; two cases are illustrated and described in **Plates 1 and 2**. Of the balance, treatment additional to the prescription of the antibiotic varied from nothing to some scaling, with the three cases previously mentioned also receiving curettage under local anaesthesia.

Radiographs: **Plate 1** illustrates the value of radiographs five months and **Plate 2**, 10 months, following therapy. In the anterior part of the mouth it is usual to observe distinct evidence of repair within three to five months whilst in the posterior areas, only slight evidence of repair is evident in the early stages due apparently to the thickness of the bone compared with the anterior regions. One must observe critically for minute restructuring changes indicating re-calcification of both the spongy bone and cortical plate or lamina dura.

SUMMARY OF RESULTS OF ALL CASES TABLE 2

Case Number — Column 1

Age of Patients at Time of Examination — Column 2

The age of the patient ranged from 14 to 23. The average age of nine Class I Periodontitis was 18.3 years, of four Class II — 19, and the one case of Class III was 21 years of age. Over-all average age was 18.64. The Adult Onset patient was 31 years of age.

Onset of Puberty — Column 3

In an attempt to see if there was any correlation between the various classes of periodontitis and severity of the condition, the remembered age of maturity or onset of menstruation was recorded. Seven of the nine cases in Class I were female and the average age of onset of puberty was 11.83. Three of the four in Class II were female with an average age of onset of puberty of 12.3. The single case of Class III reported age of puberty as being 15, and of the Adult Onset case, 13. Of interest is patient B-13 (**Plate 1**): she was 14 at the time of examination with the onset of menstruation being 11; this was probably the most severe case examined related to age. The lower anterior teeth were held in by about 2mm of bone, one first molar had been lost (cause unknown) and the remaining three first molars severely involved.

Number of Teeth Involved Related to Classification — Column 4 & 5

In Class I: Excluding teeth lost previous to date of examination, the average patient had 4.44 teeth exhibiting loss of bone from periodontitis; in Class II, 8.5 and

* Rovamycine, Poulenc, Ltd., Montreal, Canada

** Flagyl, Poulenc, Ltd., Montreal, Canada

* "Curettage" is defined in these articles as the surgical removal of granulomatous material, following scaling and root planing.

Table 2
Summary of Cases Studied

	1	2	3	4	5	6	7*	8*	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
									Healthy Site								Diseased Site									
	Case No.	Age at Exam	Onset Puberty	No. Teeth Involved	No. Teeth Involved Inc. Ext.	Oral Hygiene	Salivary Calculus	Serumal Calculus	G.I.	%B.mel Nov.	%B.mel Apr.	%Spiro Nov.	%Spiro Apr.	G.I. Nov.	G.I. Apr.	%B.mel Nov.	%B.mel Dec.	%B.mel Apr.	%Spiro Nov.	%Spiro Dec.	%Spiro Apr.	Mod. Rus. Ind. Nov.	Mod. Rus. Ind. Apr.			
Class I 9 Cases	B-1	20	14	10	10	Av+	0	0	0	15.4	21.3	0	0	1	1.0	6.7	21.6	14.7	30.5	0	4.4	11	6			
	B-4	21	11	3	3	E	+/-	0	0	27.3	18.9	0	0	1	0.5	44.8	9.2	17.4	0	0	0	8	4			
	B-5	18	12	1	1	E	0	0	0	4.9	27.5	0	0	1	0.5	24.1	6.9	26.8	1.7	0	1.2	4	3			
	B-7	15	11	4	5	G	0	0	0	2.6	34.0	4	0	1.5	0	8.9	9.9	10	0	0	0	10	8			
	B-11	19	M	8	8	G	0	+++	0	2.5		0		1.5		20.8	6.3		3.5	0		5				
	B-12	18	12	1	4	F	0	0	0	12.8		0		2		21.0			4.2			10				
	B-13	14	11	8	9	G	0	++	0	26.7	34.0	6	0	1	0	36.4	38.8	27.5	0	0	0	9	7			
	B-17	17	M	1	1	Av	0	+	0	0	37.8	0	0	1	0	33.6		10	0		2	5	3.5			
	B-19	22	12	4	6	G	0	0	0	0	43.5	0	0	1	0	30.4		28.9	4.3		0	6	3.0			
	Av.	18.3	11.83	4.44	5.22				0	10.23	30.9	1.1	0	1.1	0.29	25.2	15.45	19.34	4.9	0	1.1	7.6	4.9			
Class II 4 Cases	B-2	23	10	9	9	F	++	0	1	22.0	11.2	15.6	0	1	0	24.2	9.3	20.3	19.8	0	0	9	4.5			
	B-3	18	12	9	13	G	0	+	1	22.4	37.0	0	0	1.5	0.5	64.5	0.6	35.6	1.9	0	13.7	5	4.0			
	B-10	19	15	3	5	P	+++	+	0	63.5	42.7	0	0	1	0.5	24.1		8.6	1.7		0	8	4.0			
	B-16	16	M	13	13	P	+	0	0	0	54.9	0	0	1.5	1.0	25.2	20.3	10.9	4.9	0	10.9	6	4.5			
	Av.	19	12.3	8.5	10					27.0	36.4	3.9	0	1.25	0.5	34.5	10.1	18.36	7.1	0	6.14	7	4.3			
Class III	B-15	21	15	10	14	Av	+	+	0	13.8	64.6	0	0	1.5	0	49.9		40	2		0	8	5			
Averages	14 cases	18.64	12.27	6	7.28					15.24	35.61	1.83	0	1.25	0.36	29.61	12.66	20.95	5.32	0	2.93	7.43	4.71			
Adult Onset	B-9	31	13	8	11	G	+/-	++	0.5	12.7	7.8	0	0	1	0	28.4	0.52	17.2	0	0	0	6	2.5			

*/- = Trace
+ = Slight
++ = Moderate
+++ = Considerable

for the single Class III, 10 teeth were involved, as indicated in Column 4. Over-all average — six teeth, (included are three patients with only one first molar involved).

First molars and anterior teeth missing were not included in the above as cause of loss was unknown. If however, such teeth were considered as being periodontally involved, then the total number involved in Class I would be 5.22 (average), Class II would be 10.0 (average) for the single case of Class III, 14.0 or an over-all average of 7.28 as indicated in Column 5.

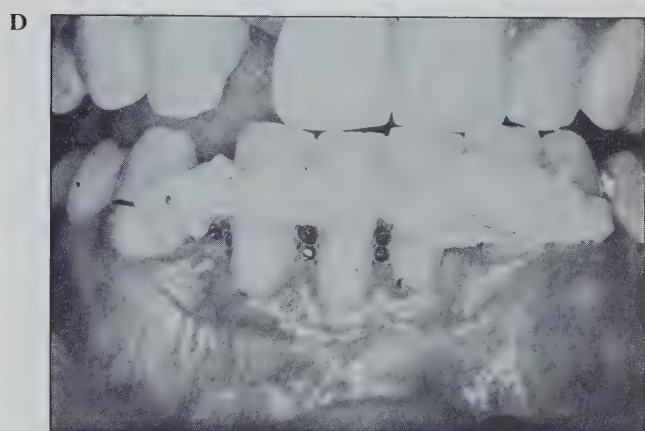
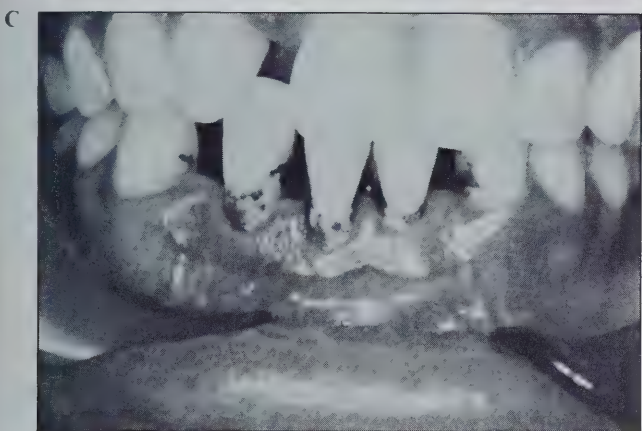
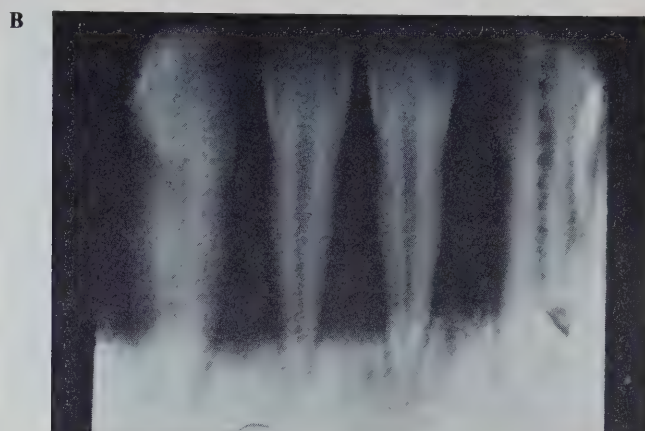
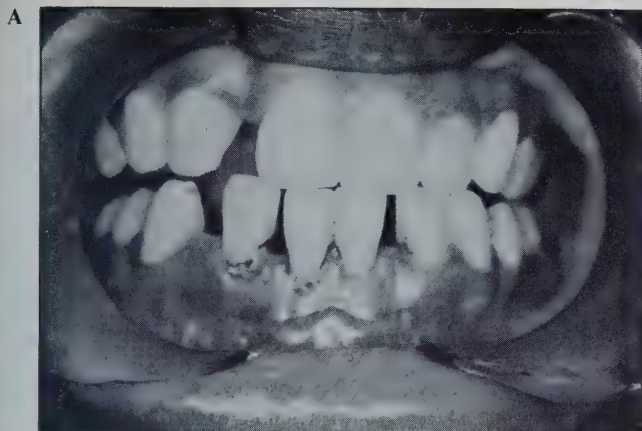
Oral Hygiene Status — Column 6

Although entirely subjective, it is interesting to note that the oral hygiene status in Class I patients appears to be much better than with those in Class II. One would

immediately presume that the greater severity of Class II cases was a result of the poorer oral hygiene. But it would also be possible that the greater severity of the condition of the Class II cases made it more difficult for the patient to practise satisfactory oral hygiene measures.

Plate 2 shows the palatal view and x-rays of the maxillary left first molar of patient B-1. She had received a prophylaxis and oral hygiene instruction four weeks prior to examination. Oral hygiene was above average. Anterior views indicated a comparatively plaque-free mouth. Spiramycin for 10 days was the *only* therapy provided, yet the photographs demonstrate quite clearly the changes in the plaque before and five months following Spiramycin therapy. The radiographic changes are

PLATE I



14 year old Barbadian girl; classic periodontitis with one first molar lost (cause unknown) and three remaining first molars and lower anterior teeth all severely involved; one maxillary lateral incisor also moderately involved. a) and b) photograph and radiograph of mandibular incisors at time of presentation (19/11/79).

Treatment: Prescription of spiramycin, 500 mg. T.I.D. for five, and 500 mg. B.I.D. for five days. c) photograph taken 15 days following start of antibiotic with shrinkage of tissue quite apparent; patient noted reduction of pain which had been constant, within 24 hours. Barbadian dentist applied temporary wire-acrylic splint and performed scaling and curettage. Photograph in d) illustrated further improvement of the soft tissues and the radiograph in e) demonstrates improvement of the bone; further improvement can be anticipated (15/4/80).

Time interval: 15 days and again 5 months.

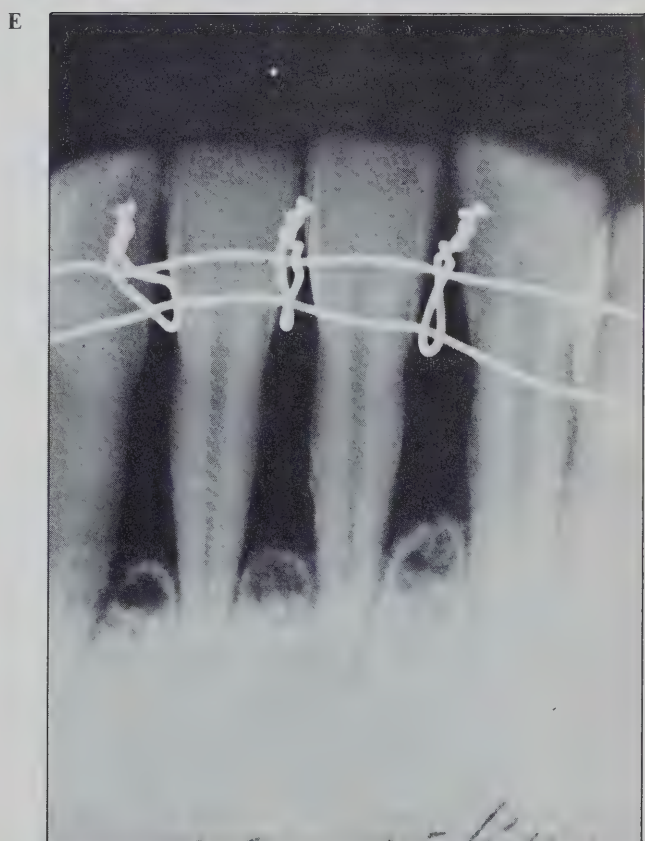
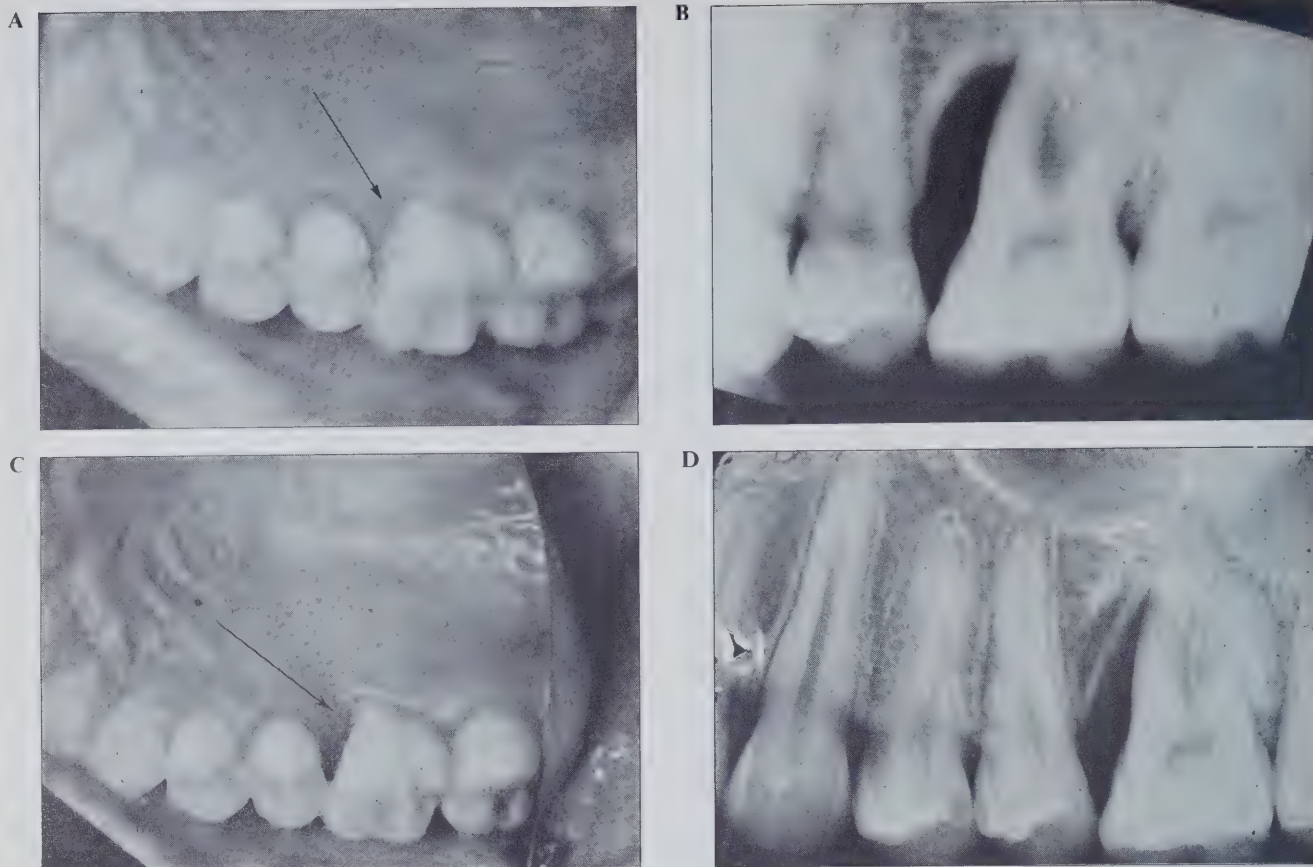


PLATE II



20 year old Barbadian girl with classic (Class I) periodontitis. All four first molars, the mandibular incisors and the maxillary incisors moderately to severely involved. (Anterior view is illustrated in Part II, Plate 6).

Treatment: Had received scaling from Barbadian dentist several weeks previously; oral hygiene was good for most buccal surfaces but only fair about lingual. Spiramycin prescribed: 500 mg. T.I.D. for 5 days and B.I.D. for a further 5 days. No further treatment was provided.

Illustrations (a) and (b) at the time of presentation. Illustration (c) of the palatal area five months later and (d) radiograph of the area 10 months later. (Courtesy of Dr. Jones). Note the oedema present in (a) with the arrow directed at the site of obtaining the subgingival plaque sample; and in (c) the shrinkage of the tissues and reduction of the oedema although gingival inflammation is still present. The radiograph in (b) taken prior to the administration of Spiramycin and that in (d) some ten months later; no other treatment was provided in the interval. Pocket probing using the modified Russell Index (i.e., from the cemento-enamel junction to the base of the pocket) measured 11 mm. at the time of the examination and 6 mm. five months later.

evident 10 months later; further improvement in the quality of the bones can be anticipated.

Salivary Calculus — Column 7

As discussed in Periodontosis Parts I and II, it is believed that calculus is not present in "active" sites and appears only when there has been some change in the oral flora indicating a shift to a more compatible type of plaque. It is interesting to note the pattern of salivary calculus: only patient B-4, a 21-year old female in Class I had any visible salivary calculus, and this in minute amounts on the lingual of the lower anterior teeth.

Two patients in Class II had salivary calculus present.

Patient B-2, was a 23-year-old female with all first molars and one maxillary first bicuspid moderately or severely involved. Although there was no evidence of involvement of the maxillary anterior teeth, all four lower anteriors had lost up to 80 per cent of their support — BUT, evidence of arresting or at least slowing down of the condition was apparent clinically and radiographically; as previously discussed*, the presence of considerable salivary calculus about these teeth could be interpreted as a sign that the oral flora had changed in the area.

Case No. 10 (Class II) was also an interesting one. In the original screening of this patient, it was believed that this 19-year-old female was a typical example of an active

crown caries type with minimal gingivitis; there was considerable neglect, oral hygiene was very poor, salivary calculus was present even on the occlusal surfaces of the mandibular right posterior teeth; radiographs and further examination however disclosed a typical arc-like pattern of bone destruction of the maxillary left first molar and typical involvement of the maxillary right central incisor. Clinical examination of the mouth indicated only slight salivary calculus on the maxillary left quadrant with the exception of areas on the buccal of the first molar and to a lesser extent, the second molar; oedema was present in this area as well as about the maxillary right central incisor. It was also interesting to observe the apparent clinical difference between the salivary calculus on the different sides of the mouth.

Serumal Calculus — Column 8

With the exception of two cases, the majority of patients exhibited no or minimal amounts of serumal calculus and where this occurred, it was found about the orifice of the pockets*. Case No. 11 (Class I) was a 19-year-old male with involvement of all four first permanent molars and the four mandibular incisors. Radiographic examination disclosed considerable serumal calculus present; it also disclosed slow breakdown of bone with signs of resistance; clinically none of the pockets was more than about 5mm in depth. Upon questioning, the patient informed us that he had suffered from whooping cough and bronchitis two years previously and had been on penicillin for six weeks. In the opinion of the senior author the prolonged use of penicillin slowed down the periodontosis and as previously discussed, at least temporarily changed the oral flora, resulting in formation of serumal calculus. In the intervening years the condition had again become moderately active.

The other patient who had considerable serumal calculus present was the most severe case previously discussed (Plate 1) — a 14-year old girl with minimal bone present about the lower anterior teeth (Class I); frequent polishing with some scaling had been previously administered and the patient had brushed more vigorously in this area. It would appear that the considerable trauma administered over a period of time had resulted in laceration of the crevicular lining of the pockets with the resultant bleeding also playing a role in the formation of the serumal calculus.

Gingivitis Index — Columns 9, 14, and 15

As discussed previously, the gingivitis index (G.I.) is of limited value in the diagnosis of periodontosis, the chief changes noted being slight oedema and slight changes in color and reduction of stippling as previously reported in "Periodontosis — Parts I & II". No relationship could be observed between the G.I. and the severity of the condition, pocket depth or other criteria. In the terminal

stages of the disease as previously discussed, granulation tissue may be present and the index similarly increased. Column 9 indicates the G.I. of all healthy sites was 0 with the exception of Cases 2 and 3 of Class II. The average G.I. from the diseased sites (Column 14) for Class I was 1.1; from Class II, 1.25; and from the one Class III, 1.5 — an over-all average of 1.25. Although subjective, Column 15 notes the average G.I. of the diseased sites five months following antibiotic therapy as being 0.36 or a reduction of 67 per cent.

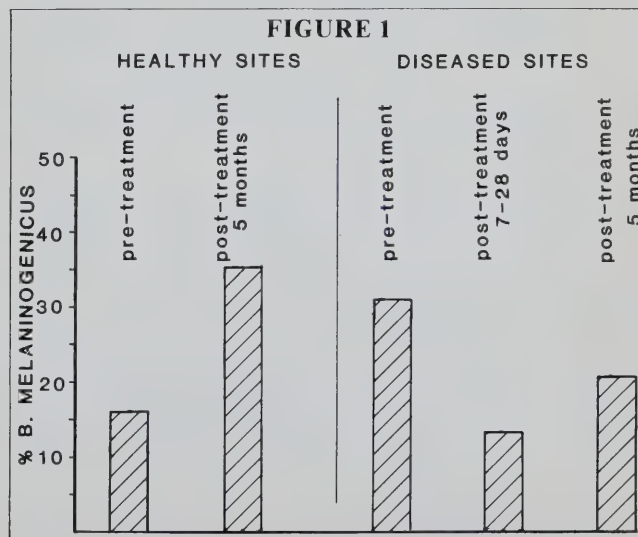
Presence of *Bacteroides melaninogenicus* — Columns 10, 11, 16, 17, & 18 and Figure 1

Healthy sites: As recorded in Column 10 the presence of *B. melaninogenicus* as a percentage of the total flora from three fields was 10.23 in Class I, 27.0 in Class II and 13.8 in the single case of Class III or an average of 15.24 per cent.

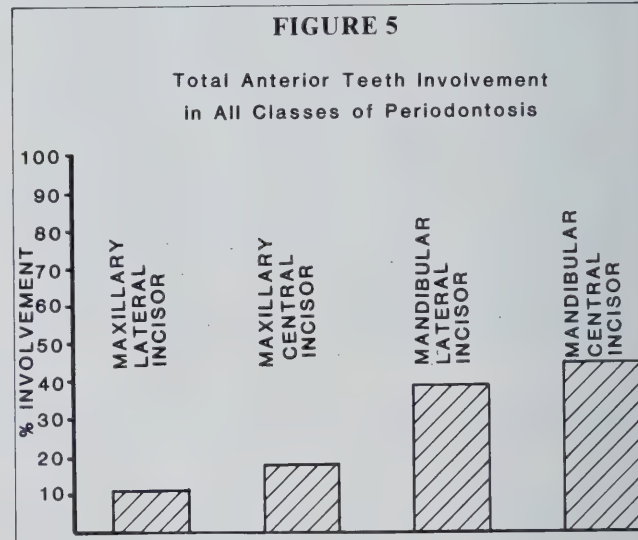
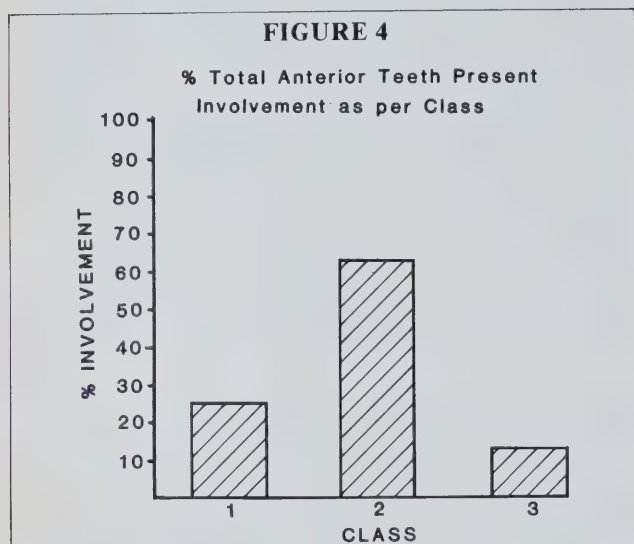
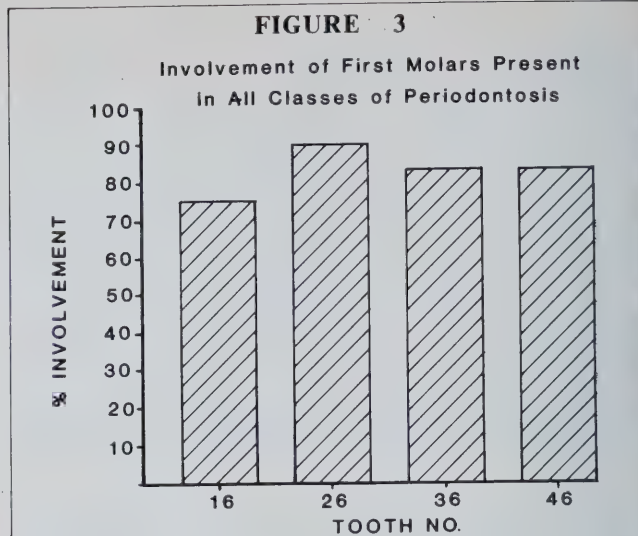
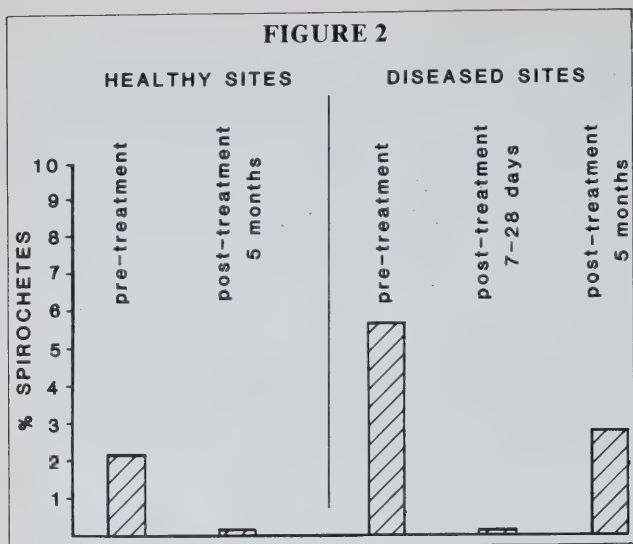
Despite clinical and radiographic evidence of improvement of all patients following Spiramycin therapy, it is interesting to note that the percentage of *B. melaninogenicus* in the healthy sites increased considerably five months following therapy, (Column 11 and Figure 1) — with the exception of the one Adult Onset case which was prescribed Metronidazole as well as Spiramycin.

Diseased Sites — Columns 16, 17 and 18 and Figure 1: It was observed that the incidence of *B. melaninogenicus* in the diseased sites averaged 29.61, almost double that observed in the healthy sites. Of the 10 patients examined from seven to 28 days following start of Spiramycin therapy, the per cent dropped to an average of 12.66, or down 54 per cent. Four months later, there was an increase of 21 per cent but still 29 per cent below the original figures — quite the opposite to that observed for the healthy sites.

Study of Column 16 indicates that the percentage of *B. melaninogenicus* from diseased sites appears to increase with each classification; Class I: 25.19 per cent, Class II: 34.5 per cent, Class III (one case): 49.4 per cent.



* Periodontosis Parts I and II



Presence of Spirochetes — Columns 12,13,19,20, & 21 and Figure 2

Healthy Sites: As indicated in Column 12, in healthy sites spirochetes could be discovered in the plaque samples in only three cases. Five months later following Spiramycin therapy, no spirochetes could be observed in any samples (Column 13).

Diseased Sites — Column 19: A greater percentage were demonstrated in Class I (4.9 percent) and particularly Class II (7.1 per cent cases compared with healthy sites: over-all average of 5.2 per cent. From seven — 28 days following start of Spiramycin therapy, no spirochetes could be found in the samples of the 11 cases re-examined. By April (five months) the spirochetes had returned (2.93 per cent), still a 52 per cent reduction compared with the original counts (**Figure 2**).

Modified Russell Index: Columns 22 and 23

All pockets were measured using the same Hu-Friedly

Williams — 17 color coded periodontal probe. Pockets were measured from the cemento-enamel junction resulting in inclusion of recession plus pocketing to record what is termed the Modified Russell Index. As was discussed in Periodontosis: Part II, probing of diseased pockets, particularly in periodontosis and active periodontitis patients is far from being an accurate scientific procedure for it is quite possible to probe well beyond the histological base of the pocket into disorganized periodontal tissues. Further errors are introduced as it is impossible to probe exactly the same site five months later, using the same angulation as well; to further complicate the matter, only one individual performed the pocket depth recordings although quite frequently a second examiner did confirm the recordings.

Bearing in mind the above it is nevertheless interesting to note the considerable reduction of pocket depth recorded following therapy: the average Modified Russell Index of all cases being 7.43 mm originally with

an apparent reduction to 4.71 mm five months later — a reduction of 36.6 per cent. Such figures would not stand up statistically but they nevertheless compare favorably with the clinical and radiographic records and past experience.

Involvement of First Permanent Molars and Anterior Teeth — Figures 3,4,5

Using the international symbols to designate specific first molars, **Figure 3** indicates the percentage of involvement of specific permanent first molars in all classes of periodontosis, excluding those previously lost for reasons unknown.

Figure 4 indicates the percent of all anterior teeth (present) involved related to classification. **Figure 5** indicates the involvement of specific anterior teeth (present); the mandibular teeth being involved more frequently than the maxillary with the mandibular central incisors being the ones most frequently involved of all anterior teeth.

Familial Pattern

Three sisters who were all born in Antigua, and of whom two were seen, were diagnosed as having periodontosis. The two seen (B-4 and B-5) practised immaculate oral hygiene measures and according to the referring dentist, the eldest sister was in the same category. The eldest, whose x-rays of December 1977 were seen, had three first molars involved — both maxillary severely involved and the mandibular left first molar moderately involved; both mandibular molars had thin or spindly shaped roots — which has been reported* as being one of the characteristics of periodontosis patients. She also had the maxillary left first bicuspid severely involved — the radiogram indicating complete loss of alveolar support. She would apparently be classified as a Class II type periodontosis — severe.

The second sister, aged 21, had three first molars moderately to severely involved with the mandibular left second bicuspid also moderately involved. She was diagnosed as a Class I Periodontosis, moderately severe.

The youngest sister, aged 18, had only one mandibular right first molar involved — and this on the mesial only; comparison of new and old x-rays indicated that some improvement in the condition had occurred in the past eight months, probably due to frequent scaling assisting the immaculate oral hygiene. She would be classified as a Class I periodontosis — early.

Apart from each of the older sisters having only one interproximal cavity restored, there was no apparent caries activity. As noted in **Table 1**, the percentage of *B. melaninogenicus* for the older of the two sisters (B-4) examined was the highest of all cases seen — certainly considerably higher than for the younger (B-5). And

lastly, it is interesting to note that the onset of puberty for the eldest sister — the most severe case — was 10 years of age; for the second eldest — age 11, and for the youngest sister with the least severe condition - 12 years of age.

DISCUSSION

The classification of periodontosis as proposed in Part I would appear to be justified from a clinical point of view. If only the classical first molar-incisor cases were included, many cases which involve the cuspid-bicuspid areas, isolated single lesions and generalized forms would be missed.

From the cases studied in this project it would appear that there might be a relationship between the three classes and the onset of puberty. There could be a relationship between the onset of puberty and the onset of periodontosis in individual cases. To determine if such a relationship definitely exists requires further study.

Although comprehensive microbiological and histopathological studies would have provided considerably more information, these were beyond the scope of the project, the study being limited to the use of fluorescence and dark-field examination for *B. melaninogenicus* and spirochetes. The unclear results of the *B. melaninogenicus* counts before and after the administration of Spiramycin could be explained by more recent information from Mouton, Hammond, Slots and Genco¹⁴ who reported that: "The Fluoretec-M reagent detected all oral and non-oral strains of *B. melaninogenicus* subsp. *intermedius*, all test strains of *B. melaninogenicus* subsp. *melaninogenicus*, and the non-oral strains of *B. asaccharolyticus*. However, the Fluoretec-M polyvalent reagent and monovalent conjugates which constitute Fluoretec-M did not detect the oral strains of *B. asaccharolyticus*". But the study was meaningful with reference to the spirochetes. They were present in greater numbers in diseased sites and were eliminated rapidly with antibiotic therapy.

The study did not indicate whether periodontosis is more prevalent amongst black races compared with other races — only that the condition is present in Barbados. Considering the number of cases discovered in such a comparatively short period of time would, however, make one suspect that the condition could be fairly common in that country.

One definite conclusion would appear to come from this study: there is a bacterial component (spirochetes) in the aetiology of periodontosis and this can be modified by the administration of the antibiotic Spiramycin with or without concurrent local therapy — although optimum results would be obtained in the opinion of the authors when both are performed. Unfortunately the limitations of the study made it impossible to consider the use of a

* Periodontosis — Part I

placebo for half the patients treated; a project of this nature is anticipated in the future.

SUMMARY

During a five-week period, November — December 1979 19 patients were examined in Barbados, 14 of these being categorized as Periodontitis; of the 14, 11 were female and three male. Sub-classification of the 14 patients (whose ages ranged from 14 — 23) was performed according to the criteria advocated in Periodontitis Parts I and II: nine were categorized as Class I, four as Class II and one as Class III. All Class I and II cases demonstrated the typical arc-type bone loss pattern about the first permanent molars. Excluding the first molars removed prior to the study, the percentage of the remaining first molars present involved with periodontitis-type lesions were (rounded out to the nearest whole figure) for Class I 79 per cent, and Class II 87 per cent. More anterior teeth were involved in Class II than in Class I; more mandibular incisors were involved than were maxillary, and the most common anterior tooth involved was the lower central incisor. Over-all and excluding extractions, the Class II cases had 8.5 teeth involved compared with 4.4 for Class I; if the lost teeth were included then the figures would be 10 for Class II compared with 5.2 for Class I. The single case of Class III indicated 10 teeth involved and if the missing teeth were included, the figure would be 14.

Of the remaining patients examined, one was classified as an Adult-Onset Periodontitis (Rapidly Destructive or Advancing Periodontitis), two as Gingivitis and two as Periodontitis; no healthy patients were seen to act as controls. If the four cases of gingivitis and periodontitis were considered for comparison, it was observed that for *B. melaninogenicus* removed from healthy sites, the average count for periodontitis was 15.2 per cent compared with the gingivitis/periodontitis cases of 5.7 per cent; for the diseased sites, 29.6 per cent in periodontitis patients compared with a count of 20.5 per cent in the gingivitis/periodontitis cases.

The average count of spirochetes for periodontitis healthy sites was 1.83 compared with a zero count for gingivitis/periodontitis patients, whilst from the diseased sites, 5.3 per cent for periodontitis patients compared with 2.8 per cent for the gingivitis/periodontitis cases.

All patients were placed on Spiramycin therapy with the one Adult-Onset case also receiving Metronidazole; additional therapy was provided for some of the patients with only a few receiving surgical curettage treatment. Considerable improvement was noted in all cases by the examiners, which was substantiated by photographic records, radiographs and microbiological studies; in the vast majority of cases, the patients all reported considerable improvement in the feel of their mouths with

elimination of pain, bleeding, tenderness to touch and with return of normal ability to masticate. Pocket depth of diseased sites utilizing a Modified Russell Index would appear to have been reduced following antibiotic therapy. Radiographs for some of the cases were obtained 10 months after the original examinations with the great majority depicting further improvement of the bone height or quality; one of these is illustrated in **Plate II**.

This project was supported in part by Grant No. MA 6176 of the Medical Research Council of Canada.

Appreciation — this study would have been impossible without the cooperation and assistance of the Ministry of Health, Senior Medical Officer, Senior Dental Officer and the dental profession and their auxiliaries of Barbados.

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REFERENCES

- 1 Russell, A.L. A Social Factor Associated with the Severity of Periodontal Disease. *J. Dent. Res.* 36:292, 1957.
- 2 Ramfjord, S.P. Indices for Incidence and Prevalence of Periodontal Disease. *J. Periodont.* 30:51, 1959.
- 3 World Workshop in Periodontics, 1966. Ann Arbor, Michigan, June 6-9, 1966. pp 182-191.
- 4 Kaslick, R.S., and Chasens, A.I. Periodontitis with Periodontitis. A Study Involving Young Adult Males. *Oral Surgery, Oral Medicine and Oral Pathology.* 25:305, 1968.
- 5 Kelly, J.E. and Van Kirk, I.E. Periodontal Disease in Adults. *Vital Health Statistics.* 12:13-15.
- 6 Belting, M., Massler, M., and Schour, I. Prevalence and Incidence of Alveolar Bone Disease in Men. *J. Am. Dent. Assoc.* 47:190, 1953.
- 7 Chan, E.C.S., deVries, J. & Harvey, R.F. Distribution of Bacterial Groups in Clinical Cases of Periodontal Disease. *J. of Dent. Res.* 58, Special Issue A, 859, Jan. 1979.
- 8 Chan, E.C.S., deVries, J. & Harvey, R.F. The Use of Fluorescence Microscopy for Monitoring Periodontal Disease States. Abstracts of the Annual Meeting of the American Society for Microbiology. 1980.
- 9 Harvey, R.F. Clinical Impression of a New Antibiotic in Periodontics: Spiramycin. *J. Can. Dent. Ass.* 27:576-585, 1961.
- 10 Harvey, R.F. Chemotherapy in Periodontal Disease, *Can. Dent. Ass. Tape Casette Vol. II, No. 3, July, 1973.*
- 11 deVries, J. & Francis, L.E. Antibiotic Therapy for the Practising Dentist: Spiramycin and General Discussion. *J. Can. Dent. Ass.* 41:No. 2, 1975.
- 12 Turnbull, R.S. and Pearson, E.G. The Role of Spiramycin in the Treatment of Periodontal Disease. *J. Can. Dent. Ass.* No. 7: 313-315, 1978.
- 13 Mills, W.H. Thompson, G.W., & Beagrie, G.S. Clinical Evaluation of Spiramycin and Erythromycin in Control of Periodontal Disease. *J. Clin. Periodont.* 6:308, 1979.
- 14 Mouton, C., Hammond, P., Slots, J., and Genco, R.J. Evaluation of Fluoretect-M for Detection of Oral Strains of *Bacteroides asaccharolyticus* and *Bacteroides melaninigenicus*. *J. of Clin. Microbiol.* 682-686, Vol.11, 1980.

Choice of toothbrushes by patients: A pilot study

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Is one type of toothbrush preferred over another? In searching the literature using computer techniques (MEDLINE), no study could be found where patients' opinions had been solicited or codified. On the contrary, many publications state that toothbrushing is essential, or at least desirable in oral hygiene maintenance, despite the absence of scientific proof. As Loe¹ states, toothbrushing is "based purely on tradition".

The use of a therapeutic dentifrice undoubtedly helps to decrease the dental caries rates, or at least to slow down the caries process. Such is also the case with mouthwashes containing fluoride.

There are two points of concern in the choice of toothbrushes: (1) the damage that the enthusiast may do to gingiva and teeth; and (2) the direction of patients by dental personnel in the choice of a toothbrush. It is our premise that given a toothbrush popular with patients and a design judged satisfactory by dental personnel, toothbrushing would be more effective in plaque control. This was explored in part by Lobene² and Wade³ but they suggested that no recommendation be made if the patient's choice of toothbrush successfully removed dental plaque.

A wide variety of brush designs is described in the literature.⁴⁻¹³ Manufacturers extol the virtues of a particular type of brush and will quote the various dental experts who proposed this design. We believed that if two brushes of satisfactory design were offered to patients, then we could find out how many preferred a satisfactory design to

the one they had been using. However, the results were surprising in that they chose one particular brush.

METHOD

Two brushes were chosen for the experiment: Oral B-30 and Butler 411 were found to be satisfactory in design. Their selection was also influenced by the fact that they had been advertised extensively in dental journals and trade magazines. Both are present at booths at dental conventions and are actively retailed to dental offices by their respective companies. As well as this extensive presentation, both brushes are available in most drugstores in Canada.

The patients were from a Vancouver dental office in which a preventive program had been active for two and a half years. Most patients were on their recall visit when asked to assist in the survey. As a guide to the oral hygiene status, the simplified oral hygiene index of Green and Vermillion¹⁴ was used.

On the initial visit, patients were given two toothbrushes, an Oral B-30 and a Butler 411. They were asked what texture their present brush was: hard, medium or soft. At the first visit, their Oral Hygiene Index (OHI) was established. Two to eight weeks later they returned to the office and again the OHI was assessed. They were asked which toothbrush they liked: one, both or neither. Then they were asked which one they intended to use. Data were analyzed by counting the numbers in categories and

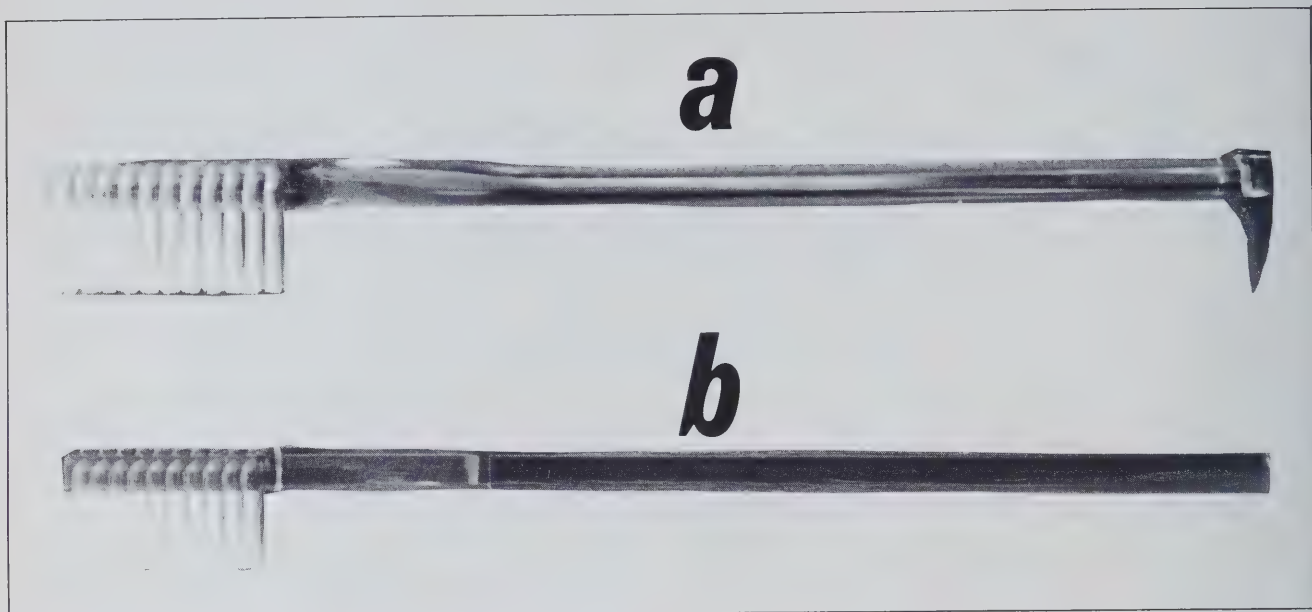


Fig 1 Toothbrush (a) — Butler 411, whose desirability was compared by patients to toothbrush (b).

comparing them with a chi-square test (Hewlett-Packard 87/97 program 17-01, Contingency Table).

RESULTS

The OHI changed from a mean of 0.52 to 0.36; this, corrected to the observational accuracy, is a decline of 0.1 (from 0.5 to 0.4). In **Table 1**, the respondents (17 males and 31 females, average age 30 years, range 15 - 62) are classified by their preference of brush during the trial period, and their selection for future use. The future preference is apparently determined by the trial preference ($\chi^2 = 4.28$). No one changed from one brush to another; all who abandoned one brush or another, went back to their own choice.

Those who chose to go back to their own choice of brush (unconverted) were classified by their pre-trial brush selection (**Table 2**). Their choices were: hard (31 per cent), medium (40 per cent) and soft (29 per cent). Unconverted are drawn equally from each group.

The relationship between the pre-trial usage of hard and medium/soft grades and post-trial selection was analyzed (**Table 3**). Again, little if any difference is found. The choice of brush, hard or medium/soft before the trial does not seem to influence their choice of future variety. In **Table 4** the numbers of unconverted who like one or the other brush is shown. In contrasting the two varieties tested, about five times as many chose the Butler 411; even those not intending to use either brush, preferred it during the trial.

DISCUSSION

It seems trite to suggest that a brush liked by the patient will be used with more enthusiasm than one which they do not like, even though the latter may be favored by oral hygiene instructors. The results show clearly a 5:1 preference for one kind of brush. The difference between the two brushes seems minimal; **Figure 1** shows the general shapes. The smaller brush is about 60 per cent smaller in bristle area, has a square handle and feels fractionally stiffer; the larger brush has a larger handle which is less angular. Such factors are the subject of further enquiry.

Therefore, the reason for preference is not clear. The brushes were not packaged similarly; one could test the bristle stiffness before choice and see the size of the head in the oral B brush. The only tentative conclusion is that the bigger brush is preferred. It was assumed that hard brushes were "popular" but it appears this is fallacious. There was no trend that indicated those who originally used what they called "hard" brushes had any prejudice towards such stiffness.

It is noteworthy, though the sample was small, that the trial was 75 per cent successful; only 12 out of 48 were uninfluenced by their use of satisfactory brushes. One would suggest that one brush was more successful than another; 30 per cent abandoned one brush (2/7), whereas 7 per cent abandoned the other (2/30). Therefore, this study shows that given a choice, most people prefer a particular brush.

Table 1 Numbers of persons favoring varieties during <i>trial</i>, and their selection for <i>future</i> use		
Variety	Trial Preference	Future Preference
Oral B30	7	5
Butler 411	30	28
Both	6	3
Neither	5	12
Total	48	48

Table 2 The numbers choosing not to use trial varieties (unconverted) categorized by texture of brush originally used			
	Hard Brush	Medium Brush	Soft Brush
All persons 48	15	19	14
Unconverted 12	5	3	4

Table 3 Choice of trial brush preferred classified by previous selection of hard or medium/soft brushes			
	Hard	Medium/Soft	Total
Oral B30	1	4	5
Butler 411	8	20	28
Both	1	2	3
Neither	5	7	12
Total	15	33	48

Table 4 Choice of trial brush by unconverted	
Preferred B30	1
Preferred 411	6
Neither	5
Total	12

CONCLUSION

Patients have preference for a particular style of toothbrush. In a sample of 48, the preference for one kind in relation to another was 5:1. The reasons for such preferences are not known. In dental health campaigns involving toothbrushes, it seems reasonable that one should recommend a brush for which the patients have a preference rather than one which, for no obvious reasons, is preferred by the dental health instructor.

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REFERENCES

- 1 Loe, H. A review of the prevention control of plaque. In: dental plaque. W.D. McHugh, ed. Dundee, Livingstone, p.264.
- 2 Lobene, R.R. How to motivate patients toward effective and permanent oral health. *Paradontologie* 25:58, 1971.
- 3 Wade, A.B. Current concepts. How do I motivate my patients towards good and permanent hygiene? *Paradontologie* 25:56, 1971.
- 4 Gluzow, H.J. and Opel, H.H. Comparative studies on the cleansing action of short head toothbrushes with various bristle fields. *Dtsch Zahnarztl Z* 30:576, 1975.
- 5 Skach, M. and Skarlandt, P. Special brush for cleaning of less accessible parts of the teeth. *Gesk Stomatol* 75:453, 1975.
- 6 Arai, T. A comparison of different toothbrushes and toothbrushing methods on plaque removal (authors translation). *Nippon Shishubyo Gakkai Kaishi* 18:13, 1976.
- 7 Bay, I., Kardel, K.M. and Skougaard, M.R. Quantitative evaluation of the plaque-removing ability of different types of toothbrushes. *J Periodont* 38:526, 1967.
- 8 Fanning, E.A. and Henning, F.R. Toothbrush design and its relation to oral health. *Aust Dent J* 12:464, 1967.
- 9 Beke, A.L. Functional stiffness characteristics of toothbrush bristles. *J Dent Res* 46:666, 1967.
- 10 Kardel, K.M., Olesen, D.P. and Bay, I. Toothbrushes ability to remove dental plaque. II. Significance of brush head size and placement of tufts. *Tandlaegebladet* 75:189, 1971.
- 11 Suomi, J.D., Horowitz, A.M., Weiss, R.L. et al. A comparison of the plaque-removing ability of a standard and an unconventional toothbrush. *J Dent Child* 39:453, 1972.
- 12 Allet, B., Regolati, B. and Muhlemann, H.R. The role of the angle of the handle in the cleaning efficiency of the toothbrush. *Schweiz Monatsschr Zahnheilkd* 82:452, 1972.
- 13 Scopp, I.W., Cohen, G., Cancro, L.P. et al. Clinical evaluation of a newly designed contoured toothbrush. *J Periodont* 47:87, 1976.
- 14 Greene, J.C. and Vermillion, J.R. The simplified oral hygiene index. *J Amer Dent Ass* 68:7, 1964.

Gingival ulceration due to improper toothbrushing

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RÉSUMÉ

Two cases of ulceration of the gingiva due to toothbrushing trauma have been presented. Initially, these cases were incorrectly diagnosed as acute necrotizing ulcerative gingivitis. The keys to diagnosis were the recent history of oral hygiene instruction and the lack of involvement of the interdental papillae. In both cases the ulcerations included part of the free margin of the gingiva but not the papillae. This is not characteristic of any other condition presenting as multiple gingival ulceration.

The sulcular brushing technique was advocated by Bass¹ in 1948 for the complete removal of bacterial plaque along the free gingival margin. This technique has gained widespread acceptance and the teaching of this method, or modifications of it, has in some patients, led to the appearance of traumatic lesions of the gingiva due to incorrect technique. Although the prevalence of these lesions cannot be ascertained from the literature, Sangnes and Gjermo² have found a higher frequency of lesions of the teeth and gingiva in patients with moderate to good oral hygiene than in those with poor oral hygiene.

Breitenmoser et al³ have postulated that traumatic lesions of the gingiva are most likely to develop shortly after instruction in oral hygiene, when the patient probably brushes particularly vigorously for some time, often with

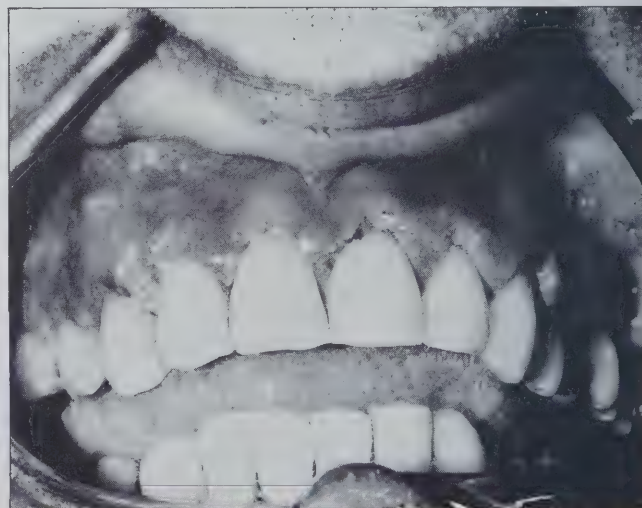


Fig 1 Multiple ulcerations of the attached and free margin of the gingivae.

a new toothbrush. They produced gingival abrasion in patients instructed to brush with excessive force and showed that larger lesions are produced using brushes with end-cut bristles than with rounded bristles.

Gingival lesions due to toothbrushing have been classified by their clinical appearance into three groups: laceration, gingival retraction and hyperplasia.⁴ The purpose of this paper is to describe two cases of gingival lesions secondary to improper toothbrushing, both of which presented diagnostic difficulties. In both cases the patients presented with multiple gingival ulcerations that were first thought to be representative of acute necrotizing ulcerative gingivitis (ANUG).

CASE REPORTS

Case 1

A 33-year-old male (with a full natural dentition) was referred by his dentist to the Clinic for Oral and Mucosal Disease, Vancouver General Hospital, with a tentative diagnosis of ANUG. The lesions, which had appeared within the previous two weeks, were along the free marginal gingiva in both arches, primarily on the facial surfaces of the anterior teeth. They were superficial ulcers approximately 3 to 4 mm at their greatest length, with regular borders, surrounding erythema and a greyish yellow base (Fig 1). The interdental papillae were not involved. No other oral lesions were present and no significant lymphadenopathy was found.

Systemic signs and symptoms were absent and the medical history was non-contributory. The history

revealed that the patient had recently been instructed in sulcular brushing and had been supplied with a soft, round-end toothbrush which he began using immediately. He reported initial significant bleeding, followed by soreness, and in a few days, ulceration. A diagnosis of trauma from toothbrushing was made, and the patient was advised to avoid brushing the involved areas, to use warm saline mouthrinses, and to soften his toothbrush in hot water before use. One week recall showed almost complete resolution of the lesions. Later discussion with the patient about brushing technique revealed that he had been attempting to remove stains from the gingival third of the anterior teeth.

Case 2

A 15-year-old Chinese male with a full natural dentition attended the Dental Hygiene Clinic at the University of British Columbia for scaling and oral hygiene instruction. Ulcerations of the attached and free marginal gingiva were present on the lingual aspect of the posterior teeth in three quadrants. The ulcers were 4 to 5 mm at their greatest length with regular borders and a greyish yellow base with surrounding erythema (Fig 2 and 3). The interdental papillae were not involved. No other soft tissue lesions were found, systemic signs and symptoms were absent, and the medical history was non-contributory. Questioning of the patient and his therapist revealed that the patient had received instruction in a sulcular brushing technique on three occasions during the past month.

A diagnosis of trauma from toothbrushing was made and the patient was instructed as in Case 1. One week recall showed that the lesions were resolving.



Fig 2 "Mirror view" — ulceration of the attached and free margin of the gingiva lingual to the mandibular left first molar and second premolar.



Fig 3 "Mirror view" — ulceration of the gingiva lingual to the mandibular right first and second premolars and first molar.

DISCUSSION

The differential diagnosis of multiple ulcers of the gingiva is extensive. The more common conditions include trauma, recurrent aphthous ulceration, primary or recurrent herpes simplex, pemphigus vulgaris, benign mucous membrane pemphigoid, idiopathic desquamative gingivitis, ulcers secondary to systemic disorders (diabetes, hormonal imbalance, uremia, leukemia, neutropenia), and acute necrotizing ulcerative gingivitis.⁵

The clinical characteristics of ANUG have been well described by many authors. They include a sudden onset in patients predominantly between 18 and 30 years of age, with surface necrosis of the interdental papillae, leading to ulceration, possibly with a greyish-white pseudomembrane. The papillae classically appear punched out, partially or completely destroyed, to form buccolingual craters which are almost pathognomonic. Necrosis may spread to the marginal gingiva, giving it a "moth-eaten" appearance. Pain may or may not be present, may vary in intensity and is usually limited to the papillae. Systemic signs and symptoms are uncommon and mild. The disease usually regresses spontaneously within two weeks.^{6,8}

When a patient (particularly one who has recently begun attending a dentist) presents with ulceration of the gingiva, the key to establishing the diagnosis of toothbrush trauma is a history of recent change in home care technique. This change is most commonly due to instruction from a hygiene therapist. The patient will appear typically to have good oral hygiene and the presence of floss cuts, although not always present, is a strong indication of improper home care. Although toothbrushing damage is reported to be more common on the patient's non-dominant side on the maxilla,⁴ this was not observed in the two cases reported here.

The major diagnostic difference between the lesions in these cases and those of ANUG is the lack of involvement of the interdental papillae. Although the marginal gingiva is frequently involved, its involvement is always due to local spread of the disease from the interdental papilla.⁸ One must not, however, rule out the possibility of ANUG on the basis of good oral hygiene as this condition has been known to occur in otherwise disease-free months.⁷

The most likely cause of misdiagnosis of these lesions is failure by the clinician to include trauma in his list of differential diagnoses. This may lead to a delay in the diagnosis and cause alarm to both the clinician and the patient. If the lesion is due to trauma, it will heal spontaneously within two weeks by modifying oral hygiene procedures for that length of time in the affected area.

Since all of the entries in the list of diagnostic possibilities which may have serious consequences are lesions of long standing, it seems reasonable to wait at least one week to determine if the ulcers are healing before initiating further procedures.

CONCLUSION

Two cases of ulceration of the gingiva due to toothbrushing trauma have been presented. These cases were first diagnosed incorrectly as ANUG. The key to diagnosis was the recent history of oral hygiene instruction and the lack of involvement of the interdental papillae which made ANUG an unlikely possibility.

In both cases, the ulcerations included part of the free margin of the gingiva but not the papillae. This is not a characteristic of any other condition presenting as multiple gingival ulceration.

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Reprint requests to Dr. Blasberg.

REFERENCES

- 1 Bass, C.D. An effective method of personal oral hygiene. *J. Louisiana Med Soc* 106:57 and 100, 1954.
- 2 Sangnes, G. and Gjermo, P. Prevalence of oral soft and hard tissue lesions related to mechanical toothcleaning procedures. *Comm Dent Oral Epid* 4:77, 1976.
- 3 Breitenmoser, J., Mormann, W. and Muhlemann, H. Damaging effects of toothbrushing bristle end form on gingiva. *J Periodont* 50:212, 1979.
- 4 Sangnes, G. Traumatization of teeth and gingiva related to habitual tooth cleaning procedures. *J Clin Periodont* 3:94, 1976.
- 5 Wood, N.K. and Goaz, P.W. Differential diagnosis of oral lesions. Ed. 1. Saint Louis, Mosby, 1975 p.89.
- 6 Pritchard, J.F. Advanced periodontal disease. Ed. 2. Philadelphia, Saunders, 1972, p.721.
- 7 Carranza, F.A. Glickman's clinical periodontology. Ed. 5. Philadelphia, Saunders, 1979, p.135.
- 8 Schluger, S., Yuodelis, R.A. and Page, R.C. Periodontal disease. Ed. 1. Philadelphia, Lea and Febiger, 1977, p.243.

INNOVATIONS

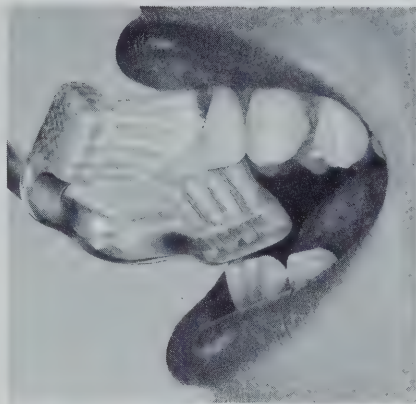
A message to the dental profession:

You can lead a horse to water, but you can't make him drink

That adage isn't about horses — it's about us human beings, isn't it? We're a perverse lot. You can show us what's good for us, even lead us to it, but you can't make us do it. Right? You can lead us to water — reason with us — and we get the point but go our own way, anyway.

The philosopher, Socrates, learned that. He thought if people understood what was reasonable they'd go ahead and do it. Those same people made Socrates drink poison.

Every dentist and hygienist has tried being a teacher, or prophet, of oral hygiene — tried to make patients practise conscientiously — tried to get them to brush their teeth properly. And every dentist and hygienist knows, in his heart of hearts, that all this good instruction hasn't wholly succeeded. Some of your patients won't take the time and care to practise oral hygiene properly, even though they understand it. That gap between understanding and behaviour is known to philosophers as "the Socratic Error." People do it their own way, anyway, even though they know better.



So we at Action Hygiene Products decided to accept human nature for what it is. We noticed that you can show people how to brush, but you can't make some do it — not right, anyway. So instead of trying to buck human nature, we thought, let's go with it. Let's try to make the job easier. Let's adapt the brush, instead of the user.

Our idea has proven out in rigorous scientific tests.

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The idea first came to two German automotive tool designers who had a friend in periodontology. The friend tried to show them the painstaking methods of slanting a brush against the teeth and moving it toward the biting surfaces. He explained why this effort was necessary to get a standard brush to work in problem crevices and interdental areas. But as tool-makers, the two Germans looked for a practical design solution in the tool itself. And the design solution was a two-headed, slanted-bristle brush — "Action 2."

The design won an award at the Brussels Salon of Inventions in 1976.

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The concept was rigorously tested by one of the few accurate methods ever established to give comparative results between different styles of brushes. It is reported in *The Journal of Periodontology* (Vol. 38, pp. 526-533). Read it yourself and make up your own mind. As the result of this test and our own experience, we make this claim:

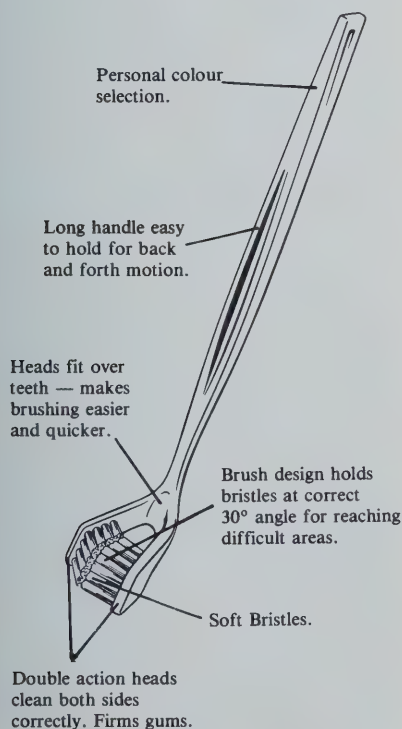
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Announcements

CANADA

Canadian Dental Association, 1981 National Convention, Calgary, Alberta, August 30-September 2, 1981. Contact: Dr. R.H. Headley, 7811 Elbow Drive S.W., Calgary, Alta. T2V 1K3.

August/aout

Canadian Academy of Prosthodontics Annual Meeting, Calgary, Alberta, August 28-29, 1981. Contact: Dr. B.M. Jackson, 22-22 Water Street S., Kitchener, Ont. N2G 4K4.

The Royal College of Dentists of Canada Annual Meeting, Convocation and Symposium on Dentistry for the Disabled, Convention Centre, Calgary, Alberta, August 28-September 1, 1981. Contact: Dr. John E. Speck, Registrar, Royal College of Dentists of Canada, 170 St. George Street, Suite 614, Toronto, Ont. M5R 2M8.

September/septembre

International Association for Orthodontics Annual Meeting, Hotel Toronto, Toronto, Ontario, September 10-13, 1981. Contact: IAO National Office, Suite 914, 211 E. Chicago Ave., Chicago, Ill. 60611, U.S.A.

Northern Ontario Dental Association 41st Annual Convention, Sheraton Caswell Hotel, Sudbury, Ontario, September 11-13, 1981. Contact: Dr. M. MacKelvie, 1132 Attlee Street, Sudbury, Ont. P3A 3J4.

October/octobre

Canadian Academy of Endodontics, 1981 Annual Meeting, Vancouver, British Columbia, October 16-18, 1981. Contact: Dr. Barry Chapnick, 235 St. Clair Ave. W., #103, Toronto, Ont. M4V 1R4. Phone: (416) 922-5115.

American Academy of Periodontology 67th Annual Meeting, Sheraton Centre, Toronto, Ontario, October 21-24, 1981. Contact: Office of the Secretary, American Academy of Periodontology, 211 E. Chicago Ave., Chicago, Ill. 60611, U.S.A.

The Canadian Society of Oral & Maxillofacial Surgeons 28th Annual Convention, Chateau Laurier Hotel, Ottawa, Ontario, October 22-25, 1981. Contact: Dr. Samuel P. Kucet, 239 Argyle, Ottawa, Ont. K2P 1B8, Tel: (613) 232-4203.

November/novembre

Toronto Academy of Dentistry Annual Winter Clinic, Royal York Hotel, Toronto, Ontario, November 26, 1981. Contact: Academy of Dentistry, 234 St. George Street, Toronto, Ont. M5R 2P2.

International September/septembre

International Conference on Mercury Hazards in Dental Practice, Glasgow, Scotland, September 2-4, 1981. Contact: Prof. J.M.A. Lenihan, West of Scotland Health Boards, Dept. of Clinical Physics & Bio-Engineering, 11 West Graham Street, Glasgow G4 9FL, Scotland.

The International Association of Stomatology, Annual Scientific Meeting, Royal College of Surgeons of England, Lincoln's Inn Fields, London, September 3-4, 1981. Contact: Prof. R. O'Neil, University College Dental School, Mortimer Market, London WC1E 6JD, England.

Third World Congress on Pain (Sponsored by the International Association for the Study of Pain), Edinburgh, Scotland, September 4-11, 1981. Contact: Third World Congress on Pain, University of Edinburgh Centre for Industrial Consultancy and Liaison, 16 George Square, Edinburgh, EH8 9LD, Scotland, U.K. or Louisa E. Jones, BS, Executive Secretary, International Association for the study of Pain, Dept. of Anesthesiology RN-10, University of Washington, Seattle, WA 98195, U.S.A.

Fédération Dentaire Internationale, 69th Annual World Dental Congress, Rio de Janeiro, Brazil, September 5-9, 1981.

International Congress on Biomaterials in Stomatology, Pretoria, South Africa, September 18-20, 1981. Contact: Congress Secretary, Faculty of Dentistry, P.O. Box 1266, Pretoria, Republic of South Africa 0001.

October/octobre

The 38th Annual Meeting of The Institute of Oral Biology, The Spa Hotel, Palm Springs, California, October 30-November 3, 1981. Contact: Executive Secretary, P.O. Box 481, South Laguna, CA 92677, U.S.A.

November/novembre

New York College of Dentistry's new one month course "Current Concepts In American Dentistry", New York University Dental Centre, 421 First Avenue, New York, New York 10010.

Seventh Convocation of Royal Australasian College of Dental Surgeons, Sydney, Australia, November 9-12, 1981. Contact: Hon. Secretary, Royal Australasian College of Dental Surgeons, Inc., 229 Macquarie Street, Sydney, NSW 2000, Australia.

Swedental Dental Congress and Trade Fair, Stockholm, Sweden, November 18-21, 1981. Contact: A.C. Nackstad, Svenska Tandlakare-Sallaskapet, Nybrogatan 53, 11440 Stockholm, Sweden.

The XVI International Congress of the Mexican Dental Association, city of Mexico, November 19-22, 1981. Contact: Dr. Luis Quiroz, Secretary General, XVI International Congress of the ADM, Cerrada de Popocatepetl 51-A, Mexico 13, D.F., Mexico.

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MANITOBA — Winnipeg. Oral surgeon certified to practise in Manitoba required for a busy practice. Object partnership. Please submit qualifications and curriculum vitae and recent photo to CDA Box Number 2054.

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Applicants should have a dental or medical degree or an honours degree in science. The successful applicants will be eligible for support and research allowances from the Alberta Heritage Foundation for Medical Research.

The first appointments will be available in 1982.

Further details can be obtained from:

Dr. J.A. Hargreaves,
Director of Graduate Studies and Research
Faculty of Dentistry,
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Edmonton, Alberta, Canada
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Faculty of Dentistry
University of Manitoba
780 Bannatyne Avenue
Winnipeg, Manitoba
R3E 0W3

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Prof. J.C. Leith
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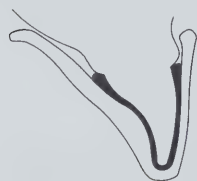
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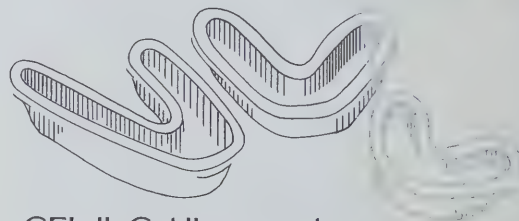
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Vol. 4, No. 8

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1. Zacherl, W. A., "Clinical Evaluation of a Sodium Fluoride-Silica Abrasive Dentifrice," *Journal of Dental Research*, Vol. 60, Special Issue A, page 577, March, 1981.

2. Beiswanger, B. B., Gish, C. W. and Mallatt, M. E., "Effect of a Sodium Fluoride-Silica Abrasive Dentifrice Upon Caries," *Journal of Dental Research*, Vol. 60, Special Issue A, page 577, March, 1981.

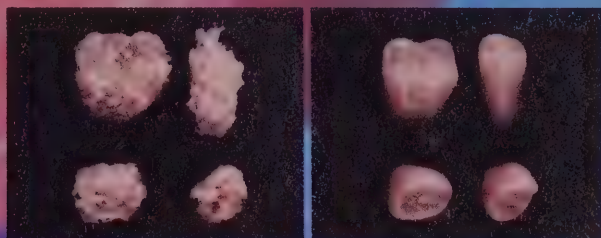
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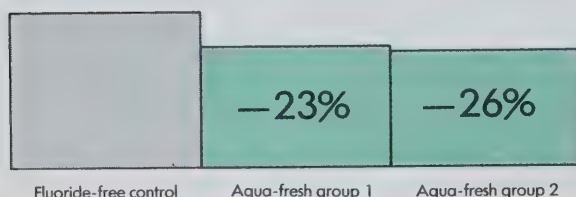


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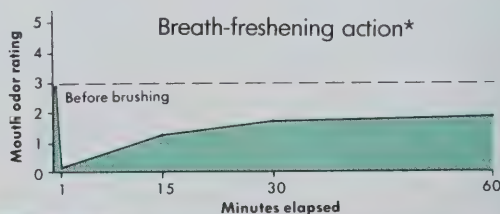


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Scale: 0 = No odor, 1 = Faint odor, 2 = Slight malodor, 3 = Moderate malodor, 4 = Strong malodor, 5 = Very strong malodor

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Editorial

475

Dr. Ralph Barolet, Chairman of CDA's Council on Dental Materials and Devices describes the role of the council and the difficulties facing dentists in selecting dental materials — an area experiencing "phenomenal growth". A Status Report from the Council appears on P. 513

Letters

479

Dr. P.M. Beck of Toronto queries Dr. Paul Mercier of Montreal on a scientific article published in the January issue of the CDA Journal. The article dealt with Mandibular Subperiosteal Implants. Dr. Mercier's response also appears.

In the News

481

Thompson appointed
Brig.-Gen. W.R. Thompson has been appointed Commander of the Order of Military Merit, in recognition of his service and devotion to duty in the Canadian Forces.

482

Dental World
The president of Dental World Center, Inc. predicts big gains for his dental franchising operation in Canada. The first complex is scheduled to open in Toronto in the Fall, with 15 additional complexes planned across the country within five years.

489

Dental manpower brief
CDA Executive Director Hubert Drouin recently presented a brief to the Federal/Provincial Advisory Committee on Health Manpower, and the text of the brief is presented.

490

Medical emergencies
Dr. Russell W. Bessette, an American dentist and medical doctor recently told delegates to the Ontario Dental Association Spring meeting the best ways to handle emergencies in the dental office. On page 491, Dr. Bessette describes the essential items for an emergency kit.

491

Pamphlet authors
Many dentists have worked extremely hard on CDA pamphlets. Their contributions are described, and an order form for all CDA material appears on Page 542.

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Lewis report

There are no simple and sure answers to the manpower question in Ontario, according to a report by Dr. D.W. Lewis.

495

Timer Failures

Dentists learned through the media about a potential problem with the Siemens Heliodont 70 X-ray machines. The CDA reacts.

497

National Dental Health Month

Dr. Michel Carvonis, chairman of National Dental Health Month has termed the 1981 campaign a success. Details of campaign activities are outlined and poster contest winners are named.

501

Continuing Education

Courses offered by the University of British Columbia and Dalhousie University are detailed.

Publications

502

Sedation, a tutorial style Manual of Sedative Techniques
This book, "with reasonable caution appears hard to beat as a simple how-to-book".

502

Oral Cancer and Precancer

"This is an excellent small volume which gives a comprehensive overview of the state of our knowledge."

503

1980 Yearbook of Dentistry

The volume is described as useful to the "conscientious practitioner" wishing to remain informed.

Self-assessment manuals

These three volumes "if used properly . . . are useful for revision and learning and would be a welcome addition to any practitioner's library."

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The Denturist Movement in Canada; Part I — MacEntee

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The Denturist Movement; Part II — MacEntee

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The Denturist Movement; Part III — MacEntee

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A method of analyzing the form of individual human teeth — McKeown

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Dental World
Education

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Journal

de l'Association
Dentaire
Canadienneaoût
1981

Editorial

- 476 Le Dr Ralph Barolet, président du Conseil des matériaux et appareils dentaires de l'ADC, décrit le rôle du conseil et l'embarras des dentistes face au choix des matériaux dentaires, domaine qui connaît un "développement phénoménal". Voir également un compte rendu du conseil à la page 517.

Lettres

- 479 Le Dr P.M. Beck, de Toronto, soulève certaines questions sur un article scientifique du Dr Paul Mercier, de Montréal, qui avait paru dans le numéro de janvier, et le Dr Mercier y répond. L'article traitait des implants sous-périostés des mandibules.

Actualités

- 505 **Honneur au Dr Thompson**
Le brigadier-général W.R. Thompson a été fait commandeur de l'Ordre du mérite militaire en reconnaissance de ses états de service et de son dévouement au sein des Forces canadiennes.
- 504 **Dental World**
Le président de Dental World Center, Inc. prévoit que ses franchises rapporteront beaucoup au Canada. Un premier complexe dentaire doit ouvrir ses portes à l'automne à Toronto et la société prévoit en ouvrir 15 autres d'ici cinq ans au pays.
- 506 **La main-d'oeuvre dentaire**
Le Journal présente au texte l'exposé de M. Hubert Drouin, directeur général de l'ADC, devant le Comité consultatif fédéral-provincial de la main-d'oeuvre de la santé.
- 510 **Les urgences médicales**
Le Dr Russell W. Bessette, dentistes et médecin américain, a décrit récemment, devant l'Association dentaire de l'Ontario, les meilleurs moyens de faire face aux urgences médicales qui peuvent survenir au cabinet du dentiste. Il a également donné les éléments de base de la trousse d'urgence.
- 511 **Les auteurs des brochures et dépliants**
Plusieurs dentistes ont travaillé fort à la mise à jour des brochures et dépliants de l'ADC. Le Journal leur rend hommage. Un bon de commande pour toutes les publications de l'ADC apparaît à la page 562

- 507 **Le rapport Lewis**
Il n'y a pas de solutions simples et faciles au problème de la main-d'oeuvre dentaire en Ontario, selon le rapport du Dr D.W. Lewis.

- 509 **Minuteries défectueuses**
Les dentistes ont appris par la presse que les appareils de radiographie Siemens Heliodont 70 pouvaient présenter certaines défectuosités. L'ADC réagit.

- 508 **Le mois de la santé dentaire**
Le Dr Michel Carvonis, président du Mois national de la santé dentaire, affirme que la campagne de 1981 a été une réussite. L'article rappelle les faits saillants de la campagne et annonce les gagnants du concours de dessin.

- 501 **Formation continue**
La liste des cours offerts par l'Université de Colombie-Britannique et l'Université Dalhousie.

Publications

- 502 **Sedation, a tutorial style Manual of Sedative Techniques**
Avec certains ménagements, ce livre excelle en disant simplement ce qu'il faut faire.
- 502 **Oral Cancer and Precancer**
C'est un excellent petit livre qui donne un aperçu complet de l'état de nos connaissances à ce sujet.
- 503 **1980 Yearbook of Dentistry**
Le "praticien consciencieux" qui veut se tenir au courant y trouvera des renseignements utiles.
- Self-assessment manuals**
Utilisé avec escient, cet ouvrage en trois volumes peut servir à l'étude et à la révision, et a sa place dans la bibliothèque du dentiste.

Scientifique

- 521 **Le mouvement des denturologistes au Canada, 1^{ère} partie**
— MacEntee
- 525 **Le mouvement des denturologistes II^e partie**
— MacEntee
- 528 **Le mouvement des denturologistes, III^e partie**
— MacEntee
- 534 **Méthode pour analyser la forme des dents humaines**
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Dental World

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La direction du Journal ne partage pas nécessairement les opinions qu'expriment ses collaborateurs à moins que l'Association Dentaire Canadienne ne les ait adoptées officiellement.

Report defective

DENTAL MATERIALS

The field of dental materials has experienced a phenomenal growth in the last 15 years due to the introduction of a host of new and improved products to better help the practising dentist in delivering dental services to his patients. We have seen the introduction of improved amalgam alloys having better physical properties and high corrosion resistance that yield superior clinical performances and render a far greater service to our patients than conventional amalgam alloys ever could do. We have seen the introduction of second and third generation resin filling materials that have permitted the dentist to repair fractured anterior teeth without the use of local anesthesia and often without even using a bur to come in contact with the teeth. New generation resin filling materials coupled with acid etching techniques are yielding smooth esthetic restorations that show no marginal infiltration, resist wear and offer superior service in our patients' mouths.

The dentist is now faced with problems of selection in his daily practice. The number of dental cements and impression materials that he can select has constantly increased over the years. The dentist can now choose the right cement for the particular problem he is facing; some are kind to the pulp, some are very strong, some are adhesive, some are palliative. New types of elastomeric impression materials yield highly stable finished impressions that produce dental models having remarkable precision. Again the dentist is called upon to make an informed selection of these materials based on factors such as handling characteristics, price, precision required, end use, etc. The wrong selection could mean that an expensive prosthesis must be redone, a tooth can become sensitive, a patient is recalled, precious clinical time is wasted. It is very apparent that, to do modern dentistry, a good knowledge of how materials are selected and handled is most important. This information comes, in part, from the materials courses taught in the universities but much of it must come from the reading and assimilating of articles published in Journals such as those that appear in this issue.

The CDA has an active Council on Dental Materials and Devices which is working to ensure that only high quality products are sold in Canada for dental service. It is doing this by active participation by some of its members in the International Organization for Standardization (ISO) and the Technical Committee on Dentistry of the Canadian Standards Association (CSA). Through these channels and organizations, Canadian standards are being established for some dental materials. At present, only five or so standards have been established but this number

should increase to 20 or so in the next few years. Dentists using materials with CSA stamp of certification will know that these materials perform adequately in the service in which they are intended.

Another project that the Council is presently engaged in is one of testing the environment in certain dental offices for mercury contamination. The CDA has offered a grant to the dental materials team at Dalhousie University to gather data on mercury contamination. This will be reported at a later date when the information is collated.

The Council, over the years, has published status reports on different dental materials used in the clinic. Reports on dental amalgam, pit and fissure sealants, alginate impression materials, microfine restorative resins, precious and non-precious metals, to only name a few have been published to date and three more are planned for publication during the coming year. By this method, the practising dentist can be better informed of the latest developments taking place in this ever-changing field.

An important liaison is maintained by the Council with the Health Protection Branch of Health and Welfare Canada. This agency is responsible for the safety and efficacy of all products, dental or otherwise, distributed in Canada. Unfortunately they do not have the resources to fully test each product before it is marketed. For this reason, they must react to complaints they receive from consumers. If, for example, a product is advertised to perform in a certain manner and it does not, then they can order this product off the shelves. This happened a year ago in the case of some soft liner materials which were voluntarily recalled by the manufacturer. However, the consumer (in our case, the dentist) must report a defective product to this agency and the CDA. Otherwise the Health Protection Branch is unable to act. Dentists are urged, if a product is indeed not performing properly or a device does not function in a safe or efficient manner, not only to return the product to the dealer who sold it but also to report this to the Health Protection Branch and members of the profession. In this manner, if enough complaints of non-compliance are received the proper agencies can intervene.

These are some of the main items of concern of the Council on Dental Materials and Devices. The members of this Council are Drs Pierre Desautels of Montreal, Derek Jones of Halifax, Len Johnson of London, Peter Williams of Winnipeg, John Gourley, formerly of Saskatoon and Dan Gau of Edmonton.

Dr. Ralph Barolet, Chairman,
Council on Dental Materials and Devices,
Quebec City.

En signaler les défauts

LE MATÉRIEL DENTAIRE

Le matériel dentaire a connu un développement phénoménal au cours des 15 dernières années à la suite de la mise en marché d'une panoplie de produits nouveaux et améliorés, destinés à mieux aider le dentiste à prodiguer ses soins aux patients. On a vu apparaître des amalgames qui ont de meilleures propriétés physiques et une grande résistance à la corrosion, donnant un rendement clinique supérieur et rendant aux patients des services beaucoup plus grands que jamais auparavant. On a vu apparaître, au cours de années, des résines d'obturation qui permettent au dentiste de réparer des fractures aux dents antérieures sans se servir d'anesthésie locale ni même, souvent, de burin pour travailler la dent. Grâce aux techniques de traitement acide dit "etching", les résines de la nouvelle génération donnent une restauration lisse sur le plan esthétique, qui ne montre aucune infiltration marginale, résiste à l'usure et rend un service supérieur au patient.

Dans sa pratique quotidienne, le dentiste est maintenant embarrassé par le choix qu'il doit faire entre les ciments et les matériaux d'empreinte dont la variété a augmenté constamment au cours des années. Il peut maintenant choisir le ciment approprié au besoin: un ciment doux pour la pulpe dentaire, un ciment très dur, un autre qui sert d'adhésif, un autre enfin qui sert de palliatif. De nouveaux matériaux élastomères donnent des empreintes définitives qui sont très stables et permettent de produire des modèles dentaires d'une précision remarquable. Ici encore, le dentiste doit savoir choisir le bon matériel, compte tenu de sa plasticité, de son coût, de la précision à atteindre, de l'usage qu'on en fera, etc. Un mauvais choix peut entraîner la reprise d'une prothèse dispendieuse, le retour d'un mal de dent, le rappel d'un patient ou la perte d'un temps précieux en clinique. Il est clair que, pour pratiquer la médecine dentaire moderne, il faut savoir au plus haut point comment choisir et utiliser le matériel. Ceci s'apprend en partie dans les cours donnés à l'université, mais surtout à la lecture et à l'assimilation des articles qui sont publiés dans les périodiques comme ceux qui paraissent dans le présent numéro du Journal.

L'ADC a un Conseil des matériaux et appareils dentaires qui est très actif et qui veille à ce que seuls des produits de grande qualité soient offerts aux services dentaires du Canada. Certains de ses membres participent de près aux activités de l'Organisation internationale de normalisation (ISO) et du Comité technique de la dentisterie au sein de l'Association canadienne des normes (ACNOR). C'est par le truchement de ces organismes que sont établies les normes canadiennes en ce qui a trait au matériel dentaire. On en a défini cinq jusqu'ici et on doit en adopter une quinzaine d'autres au cours des prochaines

années. Les dentistes qui utilisent du matériel portant le certificat CSA savent qu'il donnera un rendement adéquat s'il sert à l'usage auquel il est destiné.

Le Conseil poursuit actuellement un autre projet qui consiste à vérifier l'environnement de certains cabinets dentaires pour y déceler la présence de mercure. L'ADC a en effet donné une subvention à l'équipe du matériel dentaire de l'Université Dalhousie pour mener une étude sur la contamination par le mercure. Ces travaux seront publiés ultérieurement.

Au cours des ans, le Conseil a publié divers rapports sur le matériel dentaire utilisé en clinique. Il a traité, entre autres choses, des amalgames, des ciments servant au scellement des cavités et des fissures, des matériaux d'empreinte à base d'alginate, des résines restauratrice microfines et des métaux précieux et communs. Trois autres rapports seront publiés au cours de l'année. Ainsi, le praticien peut s'informer davantage des derniers développements qui surviennent dans ce domaine en constante évolution.

Le Conseil entretient des relations importantes avec la Direction générale de la protection de la santé (Santé et Bien-être Canada), qui veille à la sécurité et à l'efficacité de tous les produits, dentaires ou autres, distribués au Canada. Si elle n'a malheureusement pas les ressources pour vérifier entièrement chaque produit avant sa mise en marché, la direction intervient quand elle reçoit des plaintes des consommateurs. A titre d'exemple, elle peut ordonner qu'un produit soit retiré du marché, s'il ne donne pas l'effet annoncé, comme cela est arrivé il a un an, lorsqu'un fabricant a accepté de retirer de plein gré un matériel à surface molle. Il revient cependant au consommateur (en l'occurrence, le dentiste) de lui signaler tout produit défectueux; autrement, la Direction générale de la protection de la santé ne peut intervenir. Donc, si un produit ne donne pas l'effet approprié ou qu'un appareil ne fonctionne pas de façon sécuritaire ou efficace, le dentiste est prié non seulement de renvoyer le produit chez le fournisseur qui le lui a vendu mais aussi d'en informer aussitôt le ministère. Ainsi, s'il y a suffisamment de plaintes, les organismes concernés peuvent intervenir.

Voilà donc quelques-unes des grandes questions sur lesquelles se penche le Conseil des matériaux et appareils dentaires, dont les membres sont: les Drs Pierre Desautels, de Montréal; Derek Jones, de Halifax; Len Johnson, de London; Pierre Williams, de Winnipeg; John Gourley, anciennement de Saskatoon; Dan Gau, d'Edmonton.

*Le Dr Ralph Barolet,
Président du conseil du matériel et des
appareils dentaires,
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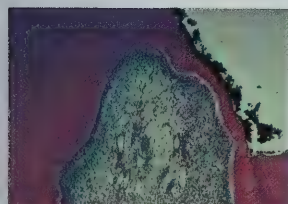
*Clinicals available on histological evaluations of Life pulp capping material:

"Histological Evaluation of Two Calcium Hydroxide Compounds on Inflamed Pulp," *Jour. Dent. Res.* Vol. 56, p. A63, I.A.D.R. Abstracts #83, 1977.
R. J. Heys, D. R. Heys, C. F. Cox and J. K. Avery, Copenhagen, Denmark.
"Theories of Mechanisms of Dental Bridge Formation. Symposium I: Developments in Pulp Capping," 1978. *Jour. Dent. Res.* Vol. 57, Special Issue A, p. 14, 1978. J. K. Avery, Washington, D.C.
"Histological Evaluation of Three Calcium Hydroxide Materials on the Dental Pulp," *Jour. Dent. Res.* Vol. 58, p. 161, I.A.D.R. Abstracts #273, 1979. D. R. Heys, C. F. Cox, R. J. Heys, J. K. Avery and D. S. Strachan. New Orleans, Louisiana.

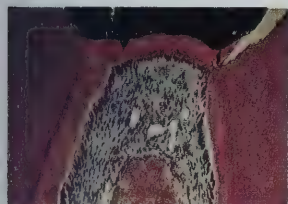
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Questions raised

I read with interest your scientific article recently published in the January C.D.A. Journal entitled Mandibular Subperiosteal Implants. You are to be complimented for undertaking such a project.

In your Table One, I was quite surprised to see that posts were not parallel and were corrected in the mouth. Since a subperiosteal is completely fabricated outside the mouth, I was wondering why there would be a need for any intra-oral correction? Also, you had mentioned that no screws were utilized and having seldom used them myself, the radiographs in Figures a, b, and c, seem to indicate a screw in the symphysis area. Since the radiograph shows there is very little external oblique ridge for retention, I can understand its use if so utilized in this instance.

When discussing evaluation of implants sinking and using cephalometric radiographs by superimposing, I just wonder how accurate a method this could be for such evaluation. Having discussed this with an Oral Radiologist, exact placement of two radiographs over one another is relatively impossible.

I must compliment you on the emphasis you place on oral hygiene and with the reference that the implant is not a replacement for natural teeth. Implants are sometimes abused, similar to natural teeth and patients wonder why problems result. I heartily agree with you also that metal strut exposure does not necessarily lead to implant failure, because once again if oral hygiene is maintained, subperiosteal implants can be enjoyed for many years.

I must disagree on a statement made, that the advantages of this service are simple and relatively inexpensive. When a patient must have a complete mandible exposed from an external oblique area on one side, circumvention of the mental nerve

bundle, exposure of the symphysis and the same on the opposite side, plus the dissection of the mylohyoid ridge and the lingual anterior area in and about the genial tubercles, I feel this is far from a simple procedure, since two surgeries are needed for this type of service, albeit the second surgical procedure is far less traumatic than the initial.

Since surgical vitallium is the metal of choice and Howmedica of Chicago is the main distributor of this metal and also recommends induction casting machines for more perfect castings, the laboratory costs are extensive. I have attempted to find a reliable dental laboratory to fabricate these castings and would be most interested to know your source since unfortunately I use a New York laboratory for all my cases.

There are just a couple of other questions I was wanting to ask, namely what type of replacement was placed over the subperiosteal, since I assume that complete over-dentures was the restoration of choice? Also, were acrylic or porcelain teeth used and were they zero degree flat cusps, or was there another type of tooth used? In mostly resorbed ridges, in any instance was the continuous Brookdale bar utilized or were there just four posts in all instances? If this is the case, I imagine a clasp-like super structure was placed over the posts, rather than the utilization of a completely passive retainer.

P.M. Beck, D.D.S.
Toronto, Ont.

Author responds

I thank you for your interest in our articles on mandibular subperiosteal implants and will try to answer your questions.

The parallelism of the posts was judged acceptable for our type of overdenture replacement prosthesis at the time of insertion. However, upon subsequent recall examination, we decided that the discrepancy was

not acceptable. The lab error was corrected in the mouth by insertion of parallel crowns over the posts to permit a better adaptation for the denture (case No. 5).

We have utilized a midline screw only in one case (case No. 1). The inclination of the mylohyoid shelf and the surgical access to the sublingual fossa are favorable anatomic factors which preclude the necessity for screws. Most implants make a snapping sound as they are inserted.

The evaluation of implant sinking on radiographs is indeed complex and has been elucidated on Page 48, bottom. The proposed method that takes into account the slight distortion possible with lateral cephalometry has been suggested. We would be pleased to use a better one, if it is available.

As for our statement that implants are relatively inexpensive, it must be taken in the context of our Clinic which is hospital based and research-oriented. The procedure is simple in the sense that it does not necessitate the use of the operating room or an expensive device, as do some of the latest transosseous implants. The procedures are performed under local anaesthesia and the casting is done by a local laboratory with prices ranging slightly above those required for casting a partial. For the same reasons, the superstructure is kept very simple in its design. We do not use "0" rings, connecting bars, or other metallic attachments. The replacement over the implant is a complete overdenture. Four posts were used in all cases. In all cases the acrylic of the denture base was in contact with the posts. It is necessary for some cases to reline the acrylic after a few years, as it becomes worn with usage.

I hope that the technical points raised were answered. They were not brought up in the paper, since the article's main emphasis was on a retrospective analysis in the light of the Harvard Consensus that defines criteria of success.

Paul Mercier, D.D.S., F.R.C.D. (C)
Montreal



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Obituaries/ Nécrologies

ADAMSON, Howard J., May 31, 1981. Dr. Adamson was born in Boston in 1895 and educated at Pictou Academy and Dalhousie University, where he studied dentistry. He served in the Dental Corps during the First World War and then moved to New Glasgow, Nova Scotia, where he studied dentistry until his retirement.

Thompson honored

Brigadier-General W.R. Thompson, C.D., a CDA governor and member of Executive Council, has been appointed Commander of the Order of Military Merit.

The appointment was made in recognition of Dr. Thompson's meritorious service and devotion to duty as a member of the Canadian Forces. The Queen is sovereign of the Order which was created in 1972.

Dr. Thompson, who is Director General of Dental Services for the Department of National Defence, said he was both "pleased and surprised" by the honor.

Dr. Thompson has been a member of the military for 36 years and served in the Second World War in the army and the air force, first as a dental assistant and then as an air navigator. After the war he took his dental training at the University of Toronto, where he graduated from the Faculty of Dentistry in 1949.

The Rt. Hon Edward Schreyer, Governor-General of Canada, is Chancellor of the Order and he will present the insignia (CMM) to Dr. Thompson at an investiture.

Dr. Thompson is from Campbellford, Ontario.

Motrin (ibuprofen)

Product Information

Action: Ibuprofen has demonstrated anti-inflammatory, analgesic and antipyretic activity in animal studies designed to specifically demonstrate these effects. Ibuprofen has no demonstrable glucocorticoid effect.

Following a single 200 mg dose of ibuprofen in humans, useful blood levels were demonstrable in 45 minutes and still present in six hours but at barely detectable levels. Peak levels occurred at approximately one hour after ingestion. Levels were lower when taken in conjunction with food.

Ibuprofen is rapidly metabolized and eliminated in the urine. The excretion of ibuprofen is virtually complete 24 hours after the last dose. The serum half-life of ibuprofen is 1.8 to 2 hours. There is no evidence of drug accumulation or enzyme induction.

Ibuprofen has been found to be less likely to cause gastro-intestinal bleeding in doses usually used than is acetylsalicylic acid.

Clinical trials in man have shown activity of a dose of 1200-1800 mg of ibuprofen daily to be similar to that of 3.6 grams of acetylsalicylic acid daily.

Indications and Clinical Uses: Motrin (ibuprofen) is indicated for the treatment of rheumatoid and osteoarthritis. Motrin is also indicated for the relief of mild to moderate pain, accompanied by inflammation, in conditions such as musculoskeletal trauma and post-dental extraction. Motrin is also indicated for the relief of pain associated with dysmenorrhea.

Contraindications: Ibuprofen should not be used in patients who have previously exhibited hypersensitivity to it, or in individuals with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to acetylsalicylic acid or other nonsteroidal anti-inflammatory agents. (see WARNINGS).

Ibuprofen should not be used during pregnancy, in nursing mothers or in pediatric patients because its safety under these conditions has not been established.

Warnings: Anaphylactoid reactions have occurred in patients with known A.S.A. hypersensitivity (see CONTRAINDICATIONS).

Pepic ulceration and gastrointestinal bleeding, sometimes severe, have been reported in patients receiving ibuprofen. Pepic ulceration, perforation, or severe gastrointestinal bleeding can have a fatal outcome, and although few such reports have been received with ibuprofen, a cause and effect relationship has not been established. Ibuprofen should be given under close supervision to patients with a history of upper gastrointestinal tract disease.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in colour vision have been reported. If a patient develops such complaints while receiving ibuprofen, the drug should be discontinued and the patient should have an ophthalmologic examination.

Fluid retention and edema have been reported in association with ibuprofen, therefore, the drug should be used with caution in patients with a history of cardiac decompensation or renal disease.

Ibuprofen, like other nonsteroidal anti-inflammatory agents, can inhibit platelet aggregation, but the effect is quantitatively less and of shorter duration than that seen with acetylsalicylic acid. Ibuprofen has been shown to prolong bleeding time (but within the normal range) in normal subjects. Because this prolonged bleeding effect may be exaggerated in patients with underlying hemostatic defects, ibuprofen should be used with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients on ibuprofen should be cautioned to report to their physicians signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

When ibuprofen is added to the treatment program of patients who have been on prolonged corticosteroid therapy, and it is decided to discontinue this therapy, the corticosteroid should be tapered slowly to avoid exacerbation of disease or adrenal insufficiency.

Aseptic meningitis has been reported in connection with ibuprofen therapy in patients with systemic lupus erythematosus. Such patients may also develop hypersensitivity reactions to ibuprofen such as fever, rash or abnormal liver function tests more often than those with other disorders. Caution should therefore be exercised when considering ibuprofen therapy for patients with systemic lupus erythematosus.

Drug Interactions

Coumarin-type anticoagulants - Several short-term controlled studies failed to show that ibuprofen significantly affected prothrombin times or a variety of other clotting factors when administered to individuals on coumarin-type anticoagulants. However, because bleeding has been reported when ibuprofen and other nonsteroidal anti-inflammatory agents have been administered to patients on coumarin-type anticoagulants, the physician should be cautious when administering ibuprofen to patients on anticoagulants.

A.S.A.: Animal studies show that A.S.A. given with nonsteroidal anti-inflammatory agents including ibuprofen yields a net decrease in anti-inflammatory activity with lowered blood levels of the non-A.S.A. drug. Single dose bioavailability studies in normal volunteers have failed to show an effect of A.S.A. on ibuprofen blood levels. Relative clinical studies have not been done.

Adverse Reactions: The following adverse reactions have been noted in patients treated with ibuprofen:

Note: Reactions listed below under Causal Relationship Unknown are those which occurred under circumstances where a causal relationship could not be established. However, in these rarely reported events, the possibility of a relationship to ibuprofen cannot be excluded.

Gastrointestinal: The adverse reactions most frequently seen with ibuprofen therapy involve the gastrointestinal system.

Incidence 3 to 9%: nausea, epigastric pain, heartburn

Incidence 1 to 3%: diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the gastrointestinal tract (bloating or flatulence).

Incidence less than 1%: gastric or duodenal ulcer with bleeding and/or perforation, gastrointestinal hemorrhage, melena, hepatitis, jaundice, abnormal liver function (SGOT, serum bilirubin and alkaline phosphatase).

Central Nervous System:

Incidence 3 to 9%: dizziness

Incidence 1 to 3%: headache, nervousness

Incidence less than 1%: depression, insomnia

Causal relationship unknown: paresthesias, hallucinations, dream abnormalities.

Dermatologic:

Incidence 3 to 9%: rash (including maculopapular type)

Incidence 1 to 3%: pruritis

Incidence less than 1%: vesiculobullous eruptions, urticaria, erythema multiforme

Causal relationship unknown: alopecia, Stevens-Johnson syndrome.

Special Senses:

Incidence 1 to 3%: tinnitus

Incidence less than 1%: amblyopia (blurred and/or diminished vision, scotomata and/or changes in colour vision). Any patient with eye complaints during ibuprofen therapy should have an ophthalmologic examination (see PRECAUTIONS).

Causal relationship unknown: conjunctivitis, diplopia, optic neuritis.

Metabolic:

Incidence 1 to 3%: decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

Hematologic:

Incidence less than 1%: leukopenia and decreases in hemoglobin and hematocrit

Causal relationship unknown: hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes (e.g. purpura, epistaxis, hematuria, menorrhagia).

Cardiovascular:

Incidence less than 1%: congestive heart failure in patients with marginal cardiac function, elevated blood pressure

Causal relationship unknown: arrhythmias (sinus tachycardia, sinus bradycardia, palpitations).

Allergic:

Incidence less than 1%: anaphylaxis (see CONTRAINDICATIONS).

Causal relationship unknown: fever, serum sickness, lupus erythematosus syndrome.

Endocrine:

Causal relationship unknown: gynecomastia, hypoglycemic reaction.

Renal:

Causal relationship unknown: decreased creatinine clearance, polyuria, azotemia.

Symptoms and Treatment of Overdose: A nineteen month old child weighing 12 kg ingested from 2800 to 4000 mg and presented with apnea, cyanosis and responded only to painful stimuli. Oxygen and parenteral fluids were given and at 12 hours she appeared completely recovered. Two other children (10 kg each) ingested 1200 mg of ibuprofen each and there were no signs of acute intoxication or late sequelae. A 19 year old male who had ingested 8000 mg of ibuprofen reported dizziness, and nystagmus was noted. He recovered with no reported sequelae after parenteral hydration and three days' bed rest.

In cases of acute overdose, the stomach should be emptied by vomiting or lavage, though little drug will likely be recovered if more than an hour has elapsed since ingestion. Because the drug is acidic and is excreted in the urine, it is theoretically beneficial to administer alkali and induce diuresis.

Dosage and Administration: Rheumatoid arthritis and osteoarthritis: The initial daily dosage in adults is 1200 mg divided into 3 or 4 equal doses. Depending on the therapeutic response, the dose may be adjusted downward or upward. The daily dosage should not exceed 2400 mg.

Maintenance therapy, once maximum response is obtained, will range from 800 to 1200 mg per day.

Mild to moderate pain associated with inflammation, dysmenorrhea: 400 mg repeated as required every 4 to 6 hours. The daily dosage should not exceed 2400 mg.

Children: Due to the lack of clinical experience, ibuprofen is not indicated for use in children under 12 years of age.

Supplied: 200 mg (yellow), 300 mg (white), 400 mg (orange) sugar-coated tablets and 600 mg (peach) film-coated tablets in bottles of 100 and 1000.

Product monograph available on request.

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Franchise operation has global aspirations



Richard Bernstein, President of Dental World Center, Inc. (on left), Dennis Cooper, President of D.J.C. Industries, Ltd. (center), Dr. Jerrold F. Heller (on right) and Dr. Dennis Corbasson (standing), at signing of Agreement between Dental World Center, Inc., D.J.C. Industries, Ltd. and Dr. Corbasson of Toronto, to franchise the Dental World System, including same-day dentistry and trademark in Canada.

A U.S. dental franchising corporation with global aspirations has set its sights north of the border for expansion.

Richard Bernstein, president of the New York-based Dental World Center, Inc., is predicting big gains for his system of "dental complexes" in Canada.

Initial plans call for the first complex to open this fall in the Toronto area, with 15 more complexes opening across the country within the next five years. Bernstein says negotiations are now under way with several dentists in Canada who are interested in buying franchise licences.

Yet visions of victory in the home territory of dentists who use tradi-

tional delivery systems may be premature.

Dr. Claude Doughty, president of the Royal College of Dental Surgeons of Ontario, told the Journal he couldn't comment on the likelihood of a Dental World complex being established in the next few months in Toronto.

Although the College has held informal talks with representatives of Dental World, Dr. Doughty says he has heard nothing concrete about an opening date. Discussions primarily centred around College guidance and instruction on existing licensing legislation.

The concept of franchising has interested a Mississauga dentist. After several visits to the Dental World headquarters in Garden City, New

York, Dr. Dennis Corbasson decided it was time to bring "same-day" dentistry to Canada.

Together with a partner, Dennis Cooper, Dr. Corbasson signed an agreement with Dental World in March to make initial payments of \$50,000 for licensing of the Dental World system and its trademark.

However, despite the event being heralded by press releases and photos, Dr. Corbasson doesn't want to talk about it. When contacted by the Journal, he declined to comment on his involvement with Dental World until his first complex opens — which under the agreement, he is responsible for financing.

When told of Dr. Corbasson's reluctance, Bernstein put it down to the

"conservative" attitude of Canadian dentists to alternate delivery systems.

"He (Dr. Corbasson) probably doesn't want to stir up the dust," he said.

According to Bernstein, a dental technician who developed the Dental World System, American patients are enjoying the benefits of his brand of consumer dentistry.

He says in the two and a half years the Garden City complex has been operating, patients have spread the news of its advantages by word of mouth. Last year alone, the complex treated 12,400 patients.

More franchises are already in the works. A complex recently opened in Suffolk County, New York; there are plans for one in California, and the corporation has just been contracted to provide dental services for a 44,000-member union in Massachusetts.

"We're very ambitious," Bernstein said.

The basic strategy of the Dental World system is to reduce patient fear, anxiety and pain. Its specialty is same-day dentistry — in particular, restorative procedures such as crowns, bridges, complete and partial dentures, and orthodontic devices.

The key to the operation is to save time. Dental specialists work together under one roof with four on-premise labs at their service.

Bernstein says patients are less nervous about seeing a dentist when they know their treatment will be completed in one day. He also points to an additional benefit achieved by eliminating multiple visits — lower costs. Dental World prices are 22 to 25 per cent less than the treatment prices of private practitioners in the States.

"Our prices are on a cost basis, rather than what the market can bear," Bernstein said. Eliminating multiple visits allows us to treat more people."

Dental World reduces patient pain by having dentists apply topical anesthesia before using needles. Pa-

tients are further encouraged to relax by watching on-premise televisions or listening to music with stereo headphones.

The whole object, Bernstein said is to get the patient in the door for treatment.

The staff at Dental World — dentists, technicians, hygienists and dental assistants — all go through a training period. Everyone is on salary. There are no associateships. Dentists hired by the corporation have to have a minimum of three-years' work experience, and many have practised in the army or through hospital residencies.

Bernstein says he would like the same regulations which apply to his franchises in the States to also apply in Canada. Of course he realizes this might cause some difficulties, especially with dramatically lower fees, posting of fee schedules, and advertising. But he is not overly worried.

"We will work within the country's laws," he says. "But we will also work to change those laws if we feel they are unfair to the consumer."

Bernstein says the backbone of the Dental World system is high quality dentistry. To ensure this quality, there are monthly inspections of the com-

plexes and poor dentists (or managers) can lose their franchises.

Bernstein says franchise owners are not required to pay any percentage of their gross profits to Dental World. Instead, there is a one-time fee for the franchise licence and then occasional fixed support fees to the corporation for such services as marketing. Since Dr. Corbasson has purchased the licence and the trademark for Canada, Canadian dentists would be dealing with him and his partner directly.

Bernstein says an associate relationship between dentists and the franchise owner could be possible in Canada, but he discourages it. He says he prefers dentists to be on salary so they are not under any pressure to produce a great volume of dental work.

The future of Dental World is an ambitious one. Bernstein hopes to establish dental complexes worldwide. The corporation now has government representatives in West Africa negotiating for franchise agreements.

Yet according to Bernstein, the goal of Dental World will always stay the same — to get the cost of dentistry down and to get the consumer to the dentist.

Capitation plan postponed

Delta Dental Plan of Michigan has indefinitely postponed plans to implement a capitation program.

Despite the entry into Michigan of capitation dental programs, state dentists have shown little support for the alternate funding system. The Michigan Dental Association (MDA) has also refused to endorse capitation.

Delta's Board of Directors had been studying the possibility of implementing an Independent Practice Association (IPA)/Capitation Model Program for several months. If approved, Delta would have offered a pilot program in a limited geographical area of the state, provided it was favored by dentists in the affected area.

However, Delta discovered there was no community in Michigan where local dentists felt the program should be attempted.

Delta was first asked to study the feasibility of a capitation program last fall by the MDA.

Yet at the MDA annual meeting in April, the association endorsed fee-for-service dentistry and pledged to improve the system. A further resolution stated that the MDA believes there are disadvantages in capitation programs and dental plan administrators, program purchasers and the public should be made aware of these disadvantages and urged not to implement capitation programs.

Clark receives NHRDP grant

Dr. Christopher Clark, of McGill University, Faculty of Dentistry, has been awarded a \$17,200 grant by Health and Welfare Canada's National Health Research and Development Program (NHRDP).

Dr. Clark will use the grant in his research to establish the general effectiveness of fluoride varnishes. He will also determine which of the two commercially available fluoride varnishes, Duraphat and Fluor-Protector, is the most effective.

With Dr. W. Paul Lang, of the dental division of the Detroit Health Department, Dr. Clark was recently commissioned by the CDA to undertake a comprehensive report on fluoridation. The two-part report —

"Water Fluoridation in Canada: A Status Report 1980" and "Analyzing Selected Criticisms of Water Fluoridation" was released earlier this year in the February and March Journals of the CDA.

Health and Welfare Minister Monique Bégin recently announced an increase in the NHRDP of \$1 million, raising the total budget for this year's program to \$11.2 million.

The program's mandate is to support scientific research of high quality and acquire information for Health and Welfare Canada.

As well as funds for research projects, the program also provides research personnel training awards. These awards are designed to en-

courage and support the creation and development of a Canadian cadre of highly competent research investigators.

The training awards will support candidates who seek research training in fields closely related to public health or health services research. The candidate who accepts the award is then under a moral obligation, upon completion of training, to engage in research in Canada in areas related to the goals of the NHRDP.

Persons interested in obtaining more information on research project funding or research training awards should contact the National Health Research and Development Program, Department of National Health and Welfare, Ottawa, K1A 1B4.

New president installed



Douglas Chaytor, right, was recently installed as president of the Association of Prosthodontists of Canada. Past-president Herb Ptack, left, and Secretary-treasurer Brock Love, centre, discuss upcoming business of the association with the new president. Other new officers of the association include President-elect Dr. Paul Jean, school of Dental Medicine, Laval University; Vice-president Dr. Shaukat Chaney, College of Dentistry, University of Saskatchewan; Secretary Dr. Love, of the University of Manitoba; and Dr. Aaron H. Fenton, Faculty of Dentistry, University of Toronto. Next year's association meeting will be held in Montreal, October 23 to 24.

Award received

A Canadian dentist recently received one of the three Awards of Special Merit presented by the American Association of Orthodontists.

Dr. Martin Louis Lack, of Chilliwack, B.C., received his award and presented a paper on his research at the 81st annual meeting of the association in San Francisco in May.

The award, established to encourage and honor student research in orthodontics, was presented to Dr. Lack for his work on cuspid movement to the back of the mouth. Dr. Lack received his orthodontic training at the University of Manitoba. He graduated from the orthodontic program last year.

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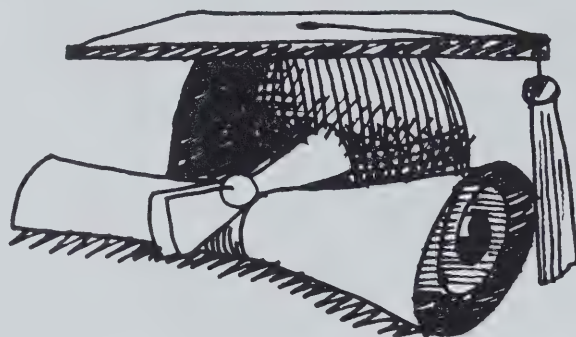
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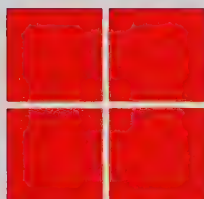
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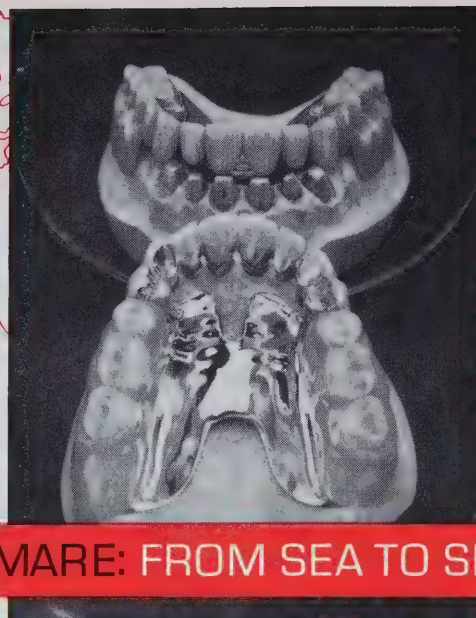


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Dental manpower situation has "profound effect"

Text of Exec. Director Hubert Drouin's brief to Federal/Provincial advisory committee on health manpower.

Dentistry in Canada is facing significant new challenges. We are moving from a situation of a chronic shortage of dental manpower to one of growing surplus. This situation is having a profound effect not only on the relative position of the dentists themselves, but also on the demand for auxiliaries and the structure of the private practice.

Various economic surveys have, in fact, aptly indicated the trends to some of these radical changes in dentistry. While every province faces a somewhat different situation, it generally holds across all of Canada that the number of dentists reporting that they are too busy has declined while the number reporting that they are not busy enough has dramatically increased over the last decade. This lack of "busyness" most affects the younger dentists. Their position is perhaps best demonstrated by the growing willingness of the new graduates to accept associate positions in established practices rather than risk setting up their own practices immediately.

It is true that part of the problem is caused by the increase in the number of dentists coupled with a slower population growth in most areas. Compared with the early 1960s, there are now close to 1,000 fewer potential patients are licensed Canadian dentist. But, despite this decline in the population/dentist ratio, demographics and numbers alone do not wholly account for the problem in dentistry. Other factors, both on the supply and demand side, have had important roles to play.

In particular, over the past two decades not only has the number of dentists increased but so has the

productivity of the dentist, thus contributing to the oversupply of dental services. The solo practice is rapidly becoming a thing of the past.

Partnerships, group practices and cost-sharing arrangements have become increasingly attractive for many reasons. First, there are certain financial benefits when two or more dentists share the costs of offices and/or employees. Second, dentists, in some form of group or cost-sharing arrangements are better able to take advantage of new and more sophisticated equipment. Finally, solo practices are often not able to make the optimum use of auxiliaries such as hygienists and secretary/receptionists; whereas the larger combined patient loads of group practices, partnerships or cost-sharing arrangements enable dentists to effectively utilize a full-time hygienist and/or secretary/receptionist.

Because of these advantages of the group practice, it is quite possible that by the end of the 1980s only 25-35 per cent of practising dentists will be solo practitioners and that these most probably will be in rural or low population density areas.

The increased productivity offered by new practice organization arrangements has also causes some reduction in average working hours from a decade ago. But, precisely because this reduction in time spent *has* been accompanied by productivity growth, it does not mean the dentist is handling fewer patients. Rather, on a per-unit-of-time basis the dentist is able to serve more patients!

On the demand side, the factors are harder to document and to some extent they are in conflict with one another. The dental nurse programs in some provinces make the available patient pool even smaller than indicated by the population/dentist ratio. The increased levels of fluoridation,

and the higher levels of preventive care also indicate a decline in the demand for some services, particularly the less exotic of the oral surgery procedures. The demand generated by the "backlog phenomenon", created by the introduction of dental insurance plans, will also die down unless there is continuing growth in insurance plans. If double-digit inflation continues, and there is every indication it will, at least in the short-term, other demands on the patients' real disposable income will provide strong competition to dental services among the uninsured population.

On the positive side, however, the decrease in demand for children's dental care can be offset by the demands of a growing adult population who, through new dental awareness, will wish to retain their own teeth as long as possible. This will generate a growing demand for endodontic, periodontic and crown and bridge services.

In short, over the next few decades the growth in demand will be influenced by many conflicting forces and it is difficult to forecast the net effect. But it is reasonable to suppose that in the next five to 10 years there will be a change in the mix of services demanded and that the supply of services will still continue to grow at a greater rate than the demand for services.

This oversupply situation will automatically produce some adjustments to dental practices by the dentists themselves. The continuing decline in the business of the dentist does suggest that there will be a reduction in the number of chairs or in the physical size of the practice. It is quite likely that the ratio of two chairs per dentist will become the dominant ratio by the end of the 1980s and thus the trend of the 1960s and 1970s to more chairs per dentist will be turned around.

The supply-demand situation also creates a strong incentive to use auxiliaries more sparingly. With more idle time on their hands, dentists will conclude that they can just as well do the work themselves. In this regard, the more highly trained auxiliary may be the first to go. The declining importance of the auxiliary may be reinforced by the move towards more complex forms of practice such as the group practice which can more fully utilize the skills of auxiliaries.

Within this rapidly changing environment, the Canadian Dental Association can play a vital role. We can provide the link among the provinces to give the profession a strong national voice. In the information gathering area, we can provide essential overviews. Don Lewis' research in Ontario, the report of Peat, Marwick & Partners in the Western provinces and the Dalhousie study in the Eastern provinces are all studies which quite responsibly aim to understand the dental manpower situation in their regions. The CDA can complement such efforts for the over-all benefit of all by pinpointing general trends, highlighting upcoming trends as seen first in certain provinces and by giving supporting and additional material. Some information can only be best obtained from a national perspective. We are, for example, in 1981/82 conducting a study which will trace the flows of dental manpower throughout Canada. In other words, we will be able to assess the relative positions of the provinces vis-a-vis the manpower problem and demonstrate their inter-relationships.

In other areas, the CDA performs important functions which have direct impact on the manpower situation. Through our extensive national education programs such as National Dental Health Month we increase the Canadian population's awareness of

the importance of good dental health. This not only increases the over-all health and well-being of the general public but also encourages dental treatment on a regular basis.

Finally, and very importantly, as a national body we are in the best position to address knowledgeably and succinctly policy questions at the federal level. Such efforts will complement activities within the provinces. By bringing the many regional interests in dentistry together we create a more cohesive dental community and provide a vehicle for na-

tional dialogue which ultimately improves the over-all relationship between the dental profession, the government and the public.

The CDA has welcomed this opportunity to speak to you today. We feel we have a continuing role to fill in context of the terms of reference defined by this committee. Clearly, there are many problems to overcome in the manpower area. These are challenges the CDA willingly accepts in the spirit of federal/provincial co-operation for which this committee stands.

Prevention key to medical emergencies

The best way to handle a medical emergency in the dental office is through prevention.

Dr. Russell W. Bessette, an American dentist and medical doctor who spoke recently to an Ontario Dental Association meeting, and who often lectures on emergencies, says dentists can recognize the "medical-risk patients" by obtaining an adequate medical history.

He says he personally prefers the written medical history form which is filled in and signed by the patient.

"It has a certain advantage in today's climate, especially with litigation being so prevalent," he said.

Dr. Bessette advises dentists to constantly update the history. He says information of prime importance is whether the patient is on medication, under the care of a physician, or has allergies.

Other areas which should be investigated include the patient's history of hospitalization, and whether the patient suffers from cardio-pulmonary disease, seizures, central nervous system disease, hepatitis or any communicable diseases.

If the patient is taking medication, Dr. Bessette says the dentist should know the primary action of the drug and any side effects which might occur.

"In a medical emergency, you need knowledge, equipment and ability," he says. How to set up an I.V. (intravenous) for a patient in the initial emergency is one of the most important things that should be known."

Before treating the emergency, the problem first has to be diagnosed. Dr. Bessette advises dentists to check the patient's vital signs: temperature (whether the skin is hot or clammy), pulse (regular or irregular), respiration (whether the rate of breathing is shallow or deep) and the blood pressure.

He says with this basic information, a tentative diagnosis can be made and a treatment plan formulated. He emphasizes that each dentist should establish his own routine for handling specific medical emergencies based on his staff people and their training and experience.

"However, whatever specific plans or methods are formulated, they

should be rehearsed during office training or study sessions," he says. "It is important to set up general responsibilities and duties for each office member prior to an emergency."

Dr. Bessette gives an example where the doctor can have the responsibility for diagnosing and directing treatment for the medical problem, while dental auxiliaries could check

for vital signs and set up the medical emergency kit. He also suggests that the office secretary call an ambulance to transport the patient to hospital.

Dr. Bessette says the dentist and his staff should work out the details of starting an I.V., administering cardiopulmonary resuscitation and appropriate drugs.

Basic office emergency kit

According to Dr. Russell W. Bessette, D.D.S., M.D., the following components would set up a very basic office emergency kit. The drugs contained in this kit have a wide margin of safety and when used to treat the appropriate condition, can be life-saving. The shortest shelf life for some drugs in this kit is one year.

He adds that it is important to realize that the kit should be kept together in one part of the office and inspected periodically.

- 1 ml ampule 1/1,000 concentration Adrenalin
- 2 cc ampule 10 mg. Valium
- 500 ml Lactated Ringer's Injection
- 19 G X 7/8" Butterfly Infusion Set
- Venoset 72" with CAIR clamp
- Alcohol Prep Sponge
- Rubber Tourniquet
- 50 ml. 8.4% Sodium Bicarbonate Injection unit with syringe and 18 G, 1-1/2" needle
- 50 ml. 50% Dextrose Injection unit with syringe and 18 G, 1-1/2" needle
- 1 bottle Nitroglycerin tablets 0.4 mg. (1/150 grain)

- Ammonia inhalant ampules
- 3 cc syringe with 20 G, 1-1/2" needle
- Ambu Bag
- 1 pediatric and adult size airway
- Oxygen source capable of delivering 6 liter flow for 45 minutes
- Stethoscope
- Blood Pressure Cuff
- 1 cc Tuberculin syringe with 25 G needle

Dr. Bessette also suggests that the dentist and his staff should review the diagnosis and treatment of the following common conditions:

- Syncope
- Angina Pectoris
- Cardiac Arrhythmias
- Myocardial Infarction
- Asthma
- Diabetic Coma
- Epilepsy
- Psychotic Reactions
- Allergy
- Respiratory Distress secondary to:
 - emphysema
 - heart failure
 - drug overdose
 - airway obstruction
- Bleeding Emergencies
- Hypertensive Crisis
- Cerebral Stroke

Pamphlet authors thanked

Providing the dental profession and the public with up-to-date information on dental health care is part of the mandate of the Canadian Dental Association.

Since 1979, CDA has been revising its current list of pamphlets to meet this commitment. It's the association's way to help dentists help their patients to become more aware of oral health.

Currently, more than half of the 20 pamphlets, available in both official languages, have been updated. The job is continuing. But it couldn't have been done without the generous donation of time and effort provided by provincial dental associations, university dental faculties and the authors themselves.

However, one person deserves very special thanks. He has invited and encouraged dentists across the country to become authors in the pamphlet revision program. He has directed them through several revisions. He has sought out and suggested graphics and pictures to incorporate in the pamphlets. He has compiled enough correspondence to fill several filing cabinets and he has advised staff on all the new pamphlets to date.

He is general practitioner Dr. Earl Freidin, of Saskatoon, Saskatchewan, a former member of the Council of Information Services which is responsible for pamphlet revision. Dr. Freidin has now relinquished his responsibilities in this area, but he is owed a debt of gratitude for his contribution to dentistry in this area.

With Dr. Freidin leading the way, here are the people who have helped us:

DENTAL X-RAYS SHOW HIDDEN PROBLEMS

Prepared in co-operation with the Canadian Academy of Oral Radiology and written by Dr. Axel Ruprecht, the pamphlet discusses the benefits and safety of dental X-rays. Dr. Ruprecht is professor and head of the department of diagnosis and oral radiology at the College of Dentistry, University of Saskatchewan. He is also secretary of the Canadian Academy of Oral Radiology and a specialty contributor on the subject of radiology to the CDA Journal.

FACTS FAVOUR FLUORIDATION

Using several national and international reports as references, the pamphlet details how fluoridation of public drinking water combats caries. It was co-authored by Dr. Ralph Burgess and Mr. Lloyd Bowen. Dr. Burgess is professor and chairman of the department of preventive dentistry at the University of Toronto, while Mr. Bowen is the fluoridation officer for the CDA.

PREPAID DENTAL INSURANCE

With the growing popularity of prepaid dental plans, the pamphlet focuses on understanding how a dental plan works. The author was Dr. Clyde Covit, Immediate Past President of the CDA. Dr. Covit has also held several positions in the Association des Chirurgiens Dentistes du Quebec, including president and chairman of the board.

EATING PROPERLY FOR BETTER DENTAL HEALTH

A pamphlet with great appeal to children, it outlines which foods are good and which foods are poor from both a nutritional and dental aspect. The pamphlet was written by Dr. Maret Truuvert, formerly with the

department of preventive dentistry at the University of Toronto, and now in private practice in Toronto.

CARE FOLLOWING MINOR ORAL SURGERY

The pamphlet was prepared in co-operation with The Canadian Association of Oral and Maxillofacial Surgeons, and it explains solutions to symptoms which may occur after oral surgery. The author was Dr. Alan Ross, an associate professor with the department of oral surgery and anesthesia at the College of Dentistry, University of Saskatchewan.

DANGEROUS IN BED

Produced by the Division of Dentistry at the Children's Hospital of Eastern Ontario in Ottawa, and published by the CDA, this pamphlet explains nursing bottle decay. It was written by Ms. Dale Scanlan, a hygienist with the hospital's dental clinic, and Dr. D.J. Kenny, who was chief of dentistry at the hospital. Dr. Kenny is now chief of dentistry for the Hospital for Sick Children in Toronto.

DO YOU HAVE PERIODONTAL DISEASE?

The pamphlet was prepared in co-operation with the Canadian Academy of Periodontology and it outlines the causes and treatment of periodontal disease. Joint authors of the pamphlet were: Dr. David Singer, professor and head of the department of periodontology at the College of Dentistry, University of Saskatchewan; Dr. Claude Ibott, a periodontist in Regina; Dr. Harvey Freedman, an associate professor of pathology at the University of Toronto; and Dr. Samuel Newman, an associate in dentistry, department of periodontics, University of Toronto.

PROTECT THAT MOUTH!

Some of the material for this pam-

phlet was originally published by the Ontario Dental Association, while other information has been published by the Ontario Ministry of Health. Dr. Frank Pulver, secretary-treasurer of the Canadian Academy of Paedodontics, assumed major responsibilities for this pamphlet. The Canadian Standards Association also proved to be of invaluable aid in recommending various types of mouth protectors for sports.

SAVE THAT TOOTH — GET TO THE ROOT OF THE PROBLEM

The pamphlet, prepared in co-operation with the Canadian Academy of Endodontics, explains the benefits of root canal treatment. It was written by two specialists in the field, Dr. George Citrome of Ottawa and Dr. Rosemary Lear of Vancouver.

CHOOSING A CAREER? DENTISTRY

This pamphlet is an introduction to the dental profession written primarily for students interested in dentistry as a career. The author was Dr. W.H. Feasby, of the department of pediatric dentistry, University of Western Ontario. Both Dr. George Peacock, secretary-treasurer and registrar of the College of Dental Surgeons of Saskatchewan, and the College of Dentistry at the University of Saskatchewan lent their assistance to provide photos for the brochure. Each corporate member of CDA also provided input.

DO IT YOURSELF ORAL HYGIENE

This pamphlet complements Eating Properly For Better Dental Health and was written by the same authors who produced Do You Have Periodontal Disease? It follows up the previous pamphlet's tips on eating nutritiously with basic techniques on how to brush and floss teeth.



NOW YOU CAN TAKE CARE OF THEIR TEETH AFTER THEY'VE LEFT YOUR CHAIR.

At the same time a patient leaves your office, he can now leave with an extra measure of your dental care. Fluorinse, home sodium fluoride treatment, can extend dental protection far beyond the limits of your office chair. And it's available in two strengths and three patient-pleasing flavours as either a daily 0.05% or weekly 0.2% rinse.

Fluorinse is particularly recommended for:

- ☐ **decay prone children**
- ☐ **caries rampant adults**
- ☐ **patients with poor dental hygiene habits**
- ☐ **orthodontic or periodontic patients**
- ☐ **patients with sensitive tooth necks**

And for children that may not be able to control their swallowing reflex, there's orange or strawberry flavoured. FLOZENGES® tablets which provide both topical and systemic effects.



Cooper Laboratories Limited
Boisbriand, Quebec

In the News

FLUORINSE®

(Sodium fluoride oral solution)

COMPOSITION: Contains sodium fluoride in a pleasantly flavoured solution at neutral pH. Contains alcohol (3% by volume).

INDICATIONS: Dental caries prophylactic

PRECAUTIONS: For buccal administration only.

DO NOT SWALLOW

Swallowing of solution may cause nausea. Usage in excess of recommended dosage may cause dental fluorosis.

DIRECTIONS: Swish vigorously in the mouth for approximately 1 to 2 minutes (preferably at bedtime after brushing and flossing teeth thoroughly) 1 to 2 teaspoonfuls (5 to 10 ml) of FLUORINSE.

Expectorate, DO NOT SWALLOW. For maximum benefit, do not eat or drink for a period of 30 minutes after rinsing.

Weekly Rinse	Daily Rinse	Weekly Rinse
Cinnamon (red)	Ice Mint (blue)	Mint (green)
0.2% sodium fluoride	0.5% sodium fluoride	0.2% sodium fluoride

HOW SUPPLIED: Fluorinse is available in 450 ml plastic bottles with child-resistant caps.

CAUTION: Keep out of reach of children.

FLOZENGES®

(Sodium fluoride tablets)

COMPOSITION: Contains sodium fluoride in lozenge form. Contains no sugar, saccharin or cyclamate.

INDICATIONS: Dental caries prophylactic for buccal and systemic administration.

PRECAUTIONS: If this product is used in an area where the drinking water has a natural fluoride content in excess of 0.7 parts of fluoride ion per million parts of water, or is artificially fluoridated, fluorosis of the tooth enamel may result.

CONTRAINDICATIONS: Sodium-free diets

RECOMMENDED DOSAGES SCHEDULE:

Age	Concentration of fluoride in drinking water (p.p.m.)		
	<0.3	0.3-0.7	>0.7
2 weeks to 2 years	0.25 mg daily (½ orange tablet)	0 mg daily	0 mg daily
2 to 3 years	0.5 mg daily (1 orange tablet)	0.25 mg daily (½ orange tablet)	0 mg daily
3 to 16 years	1.00 mg daily (1 strawberry tablet)	0.5 mg daily (½ strawberry tablet)	0 mg daily

After brushing the teeth allow the tablet to dissolve slowly in the mouth and swallow the resultant liquid. Initially, for infants, the tablet can be dissolved in juice or crushed in food. However, once teeth have erupted the infant should be encouraged first to chew and eventually, when older, to suck the tablets as described above.

HOW SUPPLIED: Flozenges are available in plastic child-resistant containers of 120 lozenges.

Two Flavours:

Orange	Strawberry
0.5 mg of fluoride ion	1.0 mg of fluoride ion

CAUTION: Keep out of reach of children. Exceeding recommended dosage over a prolonged period of time may be harmful.

Available in pharmacies only.
Full information on request.

Manpower issue - no sure answers

The issue of dental manpower in Ontario is so complex "it argues against simple and sure answers."

This conclusion is contained in Dr. D.W. Lewis' summary report, "Research into Dental Manpower in Ontario."

However, Dr. Lewis says "there is no need to panic about the dental manpower 'crisis'"

In defining the word "crisis", Dr. Lewis includes danger plus opportunity.

"Consistent with this meaning and in recognition of the long-term influence that changes implemented now may have on the pattern of dental care services for years to come, it is very important that the policy initiatives arise from considerations of the opportunity they present, rather than from panic and fear with short-term, narrow interests in mind The danger is that precipitous decisions based on present fears, power, status, economics and politics will lead to an irrational delivery system, not in the best interest of the public. To avoid this is a real challenge."

Financed by the Ontario Ministry of Health, the research, consisting of 16 reports plus the summary, took 31 months to complete. Dr. Lewis works with the Dental Health Care Services Research Unit at the University of Toronto.

From 1968-78 in Ontario, there were "significant changes" in the supply of dental manpower, the report says.

Certified dental assistants doubled in number; licensed dentists increased by about 35 per cent; and dental hygienists' numbers grew by 290 per cent. Denture therapists, preventive dental assistants and restorative dental hygienists were recognized as well. Meanwhile, the population increased by only 20 per cent.

"... The public has/will have better geographic and economic ac-

cess to dental care because of improvements both in the supply and distribution of dental personnel and in dental insurance coverage.

"... slower population growth and an aging population which, relatively, uses dental services less and has less insurance suggest overall per capita reductions in the amount of care demanded, although since these elderly will have more natural teeth than in the past there are some who feel that their dental utilization will increase over the present. The implications of improved oral health on demand for care are two-fold. Firstly, those who seek care regularly will require, on average, less dental work and therefore, barring extensive application of the facilitative effect described above for the dentally insured or unnecessary over-servicing by the dentist, should demand less care. Secondly, those who seek care symptomatically will tend to have fewer problems (e.g. toothaches) and, therefore, demand less care. However, as just mentioned in regard to the elderly, an increasingly dentate population will have dental care needs and different kinds of dental care needs and different kinds of dental care needs for a longer period of time. So, over a lifetime, it is unlikely that demand for dental care due to improved oral health will be lower."

The studies found that "there will be an increasingly large dental visit supply excess which is much greater than the current and recent past supply excesses."

Based on the criteria developed by Lave, Lave and Leinhardt, the dentist:patient ratio has improved in Ontario, and will continue to do so if graduation levels remain constant. In 1968, the ratio was 1:2,427 persons and projected to 1996 will be 1:1,599.

The study warns that unless dentists work towards a target income, their incomes will go down as the number of dentists increases. It is also noted that no evidence of this was discovered in the available data up to 1978.

Dr. Lewis says in his summary report "The manpower research reveals,



Cooper Laboratories Limited
Boisbriand, Que.

especially in its other reports a great deal of information about the dental care providers of Ontario and the characteristics of their work, and about the public's dental attitudes and care-seeking habits. This is important material. It, however, is low profile and will largely be ignored in favour of the high profile findings about the possibility of an increasingly large future oversupply of dental personnel in Ontario."

X-ray warning

Timer failures in a dental x-ray machine have prompted a warning from Health and Welfare Canada.

Siemens Heliodont 70 machines, equipped with Digitime HDT-3004 controls have experienced problems which result in continual emission of x-rays. This can cause significant overexposure to patients, particularly if the operator does not realize a timer failure has occurred.

Caution is urged. The timer failure is described as intermittent. The "Alert Medical Devices" release says "The occurrence of such failure would manifest itself through excessive darkening of radiographic films."

The Association learned of the alert through the media, rather than from Health Protection Branch of Health and Welfare Canada.

Dr. Gilbert Utas, president of the Canadian Dental Association, has written a letter to the deputy minister, Larry Fry, indicating the profession's concern over the notification procedures.

Dr. Utas said in his letter "premature release of such information to the news media, without prior notification to the profession, can embarrass the Association and its individual members. More importantly it can unduly alarm the public, undermine their desire to seek dental treatment and interfere with patient-practitioner relationships through loss of confidence."

While noting that communications between government and the profession have improved, Dr. Utas said adequate notification, along with technical information could "allay patient fears and reduce embarrassment by all concerned."

The Ontario Dental Association has also notified its members of the potential dangers, and advises that only models 3004 and 3005 are of concern.

Should there be any problems, release of the deadman switch will ensure that overexposure to patients is kept to a minimum. Increasing or decreasing the setting of the machine by three or four pulses (in the 3004) or one stop (in the 3005) may end the problem.

Dentists can obtain further information from the Director, Radiation Protection Bureau, Environmental Health Directorate, Health Protection Branch, Confederation Heights, Ottawa, Ont. K1A 1C1; (613) 998-9046.

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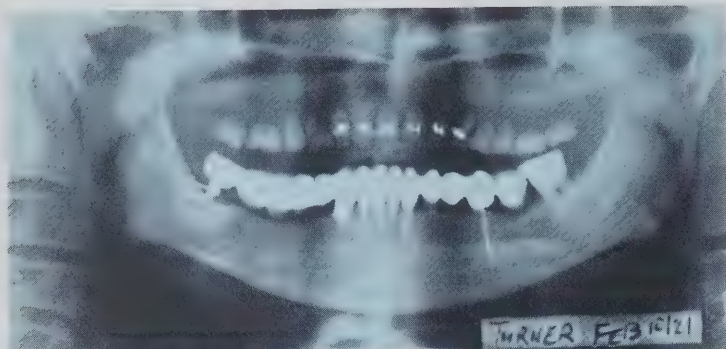
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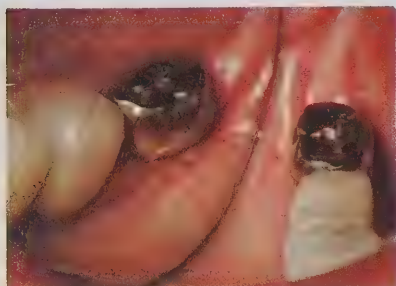
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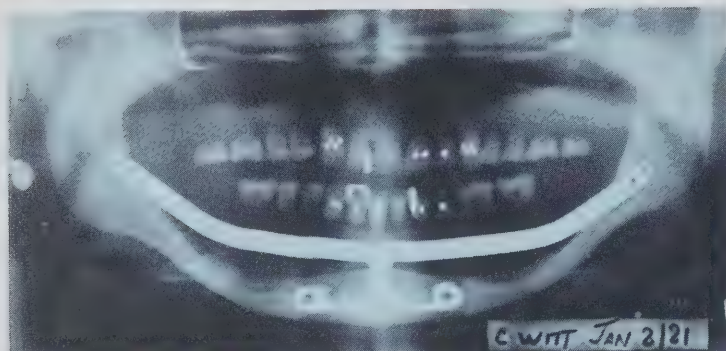
Panoramic radiograph of ramus implant taken in its 14th year of service.



Buccal view shows healthy tissue on same implant.



Detailed radiograph of the implant.



This radiograph taken in the 11th year shows the severe atrophy of the mandible resulting from attempts to wear a full denture.



Healthy bone and gingival tissues attest to a successful operation.

In 1978 a research project was conducted at Baylor College of Dentistry in the departments of Oral and Maxillofacial Surgery and Prosthodontics on the one-piece mandibular ramus frame implant.

There were 815 replies — reports ranging from patients 21 to 81 years of age. The success rate of placement of the ramus frame implant was 95 percent and the average age of the implant in place was four years. The longest length of time of placement was 10 years.

A review of the current methods of preprosthetic surgery included the following:

- (1) Visor osteotomy with bone grafting and vestibuloplasty
- (2) Ridge augmentation with bone and alloplastic materials
- (3) Vestibuloplasty with skin graft from buccal mucosa, palatal mucosa and skin
- (4) Multiple-piece ramus frame implant
- (5) Mandibular staple
- (6) One-piece ramus frame implant
- (7) Subperiosteal implant

It is our experience that the one-piece mandibular ramus frame implant fulfilled the needs for stabilization of mandibular prosthesis better than other methods.

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Professor and Chairman
Oral and Maxillofacial Surgery Department
Chief of Dentistry
Baylor University Medical Center

Joseph D. Lambert, DDS
Professor and Chairman
Removable Prosthodontics
Baylor College of Dentistry

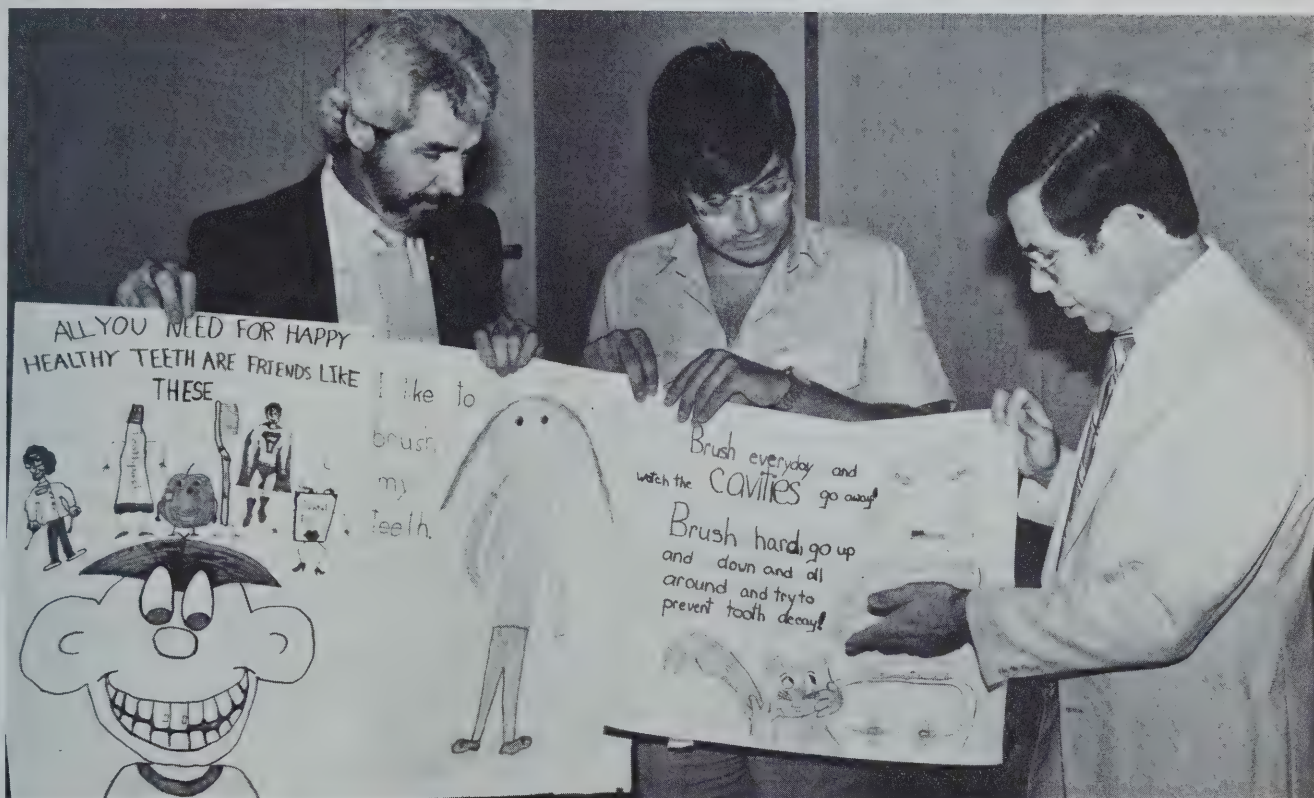
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Dallas, Texas 75246**

All information quoted from *Journal of Implantology*.

Sponsored by the Canadian Society of Implant Dentistry.

National Dental Health Month a winner



NDHM Poster Judges take a final look at the winning entries. From left to right, they are artist Bruce Rawlins, NDHM Chairman Dr. Michel Carvonis and CDA Executive Director Hubert Drouin. The winning posters, from left to right, were drawn by Robbie Meikle of Calgary, Leanne Frey of Seven Persons, Alberta, and Marney Leslie of North Battleford, Saskatchewan.

The 1981 National Dental Health Month has been a success.

Provincial dental associations, local dental societies, hygienists and dental assistants have all worked together to spread the word about dental health awareness.

National Chairman, Dr. Michel Carvonis, told the *Journal* he was very pleased with his first campaign.

Pointing particularly to the increased media coverage of the April campaign, Dr. Carvonis said the message of "Good Mouthkeeping" is being heard across the country. However, he added there is even more work to be done.

"Next year we're going to try to be more effective," he promised. "And I want suggestions from dentists on how we can do this."

In Canadian newspapers, more than 180 stories were published informing the public that April was National Dental Health Month. CDA received a generous response from the country's French and English radio stations for free air time to play the eight dental health radio spots. At least \$8,800 was donated to the campaign in radio air time.

For the second consecutive year, CDA distributed television promos featuring Shari Lewis to each province. The tapes carried the name of the provincial association as well as the national association. These 30-second promos were also distributed to the CBC, CTV and Global networks with the CDA identification.

As a means of reaching an even larger audience, CDA produced a

French language television promo which will be aired during the 1982 campaign. Well-known Quebec children's entertainer, Claude Steben (Captain Cosmos) appears in the promo singing a short jingle reminding children to brush their teeth.

Other media events of the '81 campaign included interviews with members of the dental profession on local radio television and cable stations.

Provincial support was also very strong for this year's campaign. The CDA planning kits, which are distributed free and contain newspaper articles, publicity suggestions, speeches and many more helpful tips on campaign planning, proved to be extremely popular.

Three hundred and sixty-eight English language planning kits were

In the News

ordered by provincial dental associations, an increase of 57 kits from the year before. There was also a rise in the number of French planning kits ordered, from 104 in 1980 to 206 in 1981. As well, the hygienists' association and dental nurses and assistants' association received 22 kits and there were a large number of individual requests from schools, health departments and community groups.

The sale of promotional material was also up. Poster sales more than doubled from the 43,500 English and 2,500 French posters sold in 1980 to the 91,000 English and 11,000 French posters sold in 1981. The sale of decals went very well with 118,000 English and 172,000 French decals purchased.

Six provinces — British Columbia, Alberta, Saskatchewan, Ontario, Nova Scotia and Newfoundland par-

ticipated in the 1981 NDHM poster contest.

Judging in three categories — Kindergarten to Grade 1, Grades 2 to 4, and Grades 5 to 7 — took place at CDA headquarters in Ottawa. After much deliberation, the panel of judges — CDA Executive Director Hubert Drouin, NDHM Chairman Dr. Michel Carvonis, and Bruce Rawlins, an Ottawa commercial artist — chose the winners.

They are: Leanne Frey, a Grade 1 student of Seven Persons, Alberta; Marney Leslie, a Grade 4 student of North Battleford, Saskatchewan; and Robbie Meikle, a Grade 5 student of Calgary, Alberta. Each child will receive a bicycle donated by the CDA.

The extent of involvement in NDHM by the community was evident by the wide response CDA re-

ceived from dentists wishing to award local citizens and organizations inscribed CDA Certificates of Appreciation. More than 285 English and French certificates were distributed across the country to individuals and groups who were especially helpful in carrying out NDHM programs.

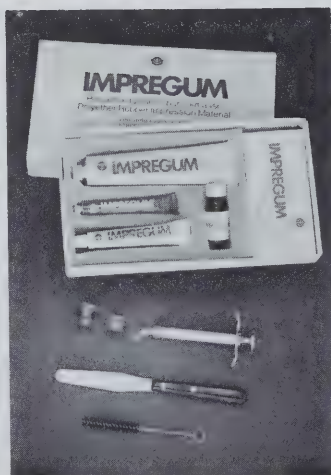
Two national companies also made generous contributions. Commonwealth Holiday Inns of Canada Ltd. promoted National Dental Health Month on its billboards, while McDonald Restaurants of Ontario sponsored NDHM artwork on its tray liners.

Dr. Carvonis concluded that the amount of co-operation shown by dentists during this year's campaign proves the profession can meet the challenge of improving the dental health of Canadians.

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pressions retain uniform firmness and shape, giving you a precise model with

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SYNOPSIS OF ORAL PATHOLOGY

By S.N. Bhaskar, B.D.S., D.D.S., M.S., Ph.D.
May, 1981. 720 pages, 716 illustrations.
Book Code No. 0685-3 **Price \$35.50**

NEW!

ATLAS OF ORAL PATHOLOGY

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NEW!

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Yagiela, D.D.S., Ph.D.; with 2 contributors.
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In the News

"	Saint John, New Brunswick	Orthodontics	Orthodontics	Oct. 23-24, 1981	Lecture	Dr. Wayne Barro	open		general practitioners, specialists, assistants, hygienists, lab technicians, other.	Kaireen Vaison (902) 424-2248
Continuing Dental Education University of British Columbia 105-2194 Health Sciences Mall Vancouver, B.C. V6T 1W5	Vancouver, British Columbia	Periodontal Therapy: Matching Patient Needs With Treatment Methods	Periodontics	Sept. 12-13, 1981	Lecture	Dr. Wm. Ammons	open	Dent. \$130 Auxl. \$55	general practitioners, specialists, assistants, hygienists.	Dr. M.F. Williamson (604) 228-2627
"	"	Problems in Fixed and Removable Prosthodontics — Some Practical Solutions	Prosthodontics (Fixed) (Removable)	Sept. 26, 1981	Lecture	Dr. Alex. Koper	open	Dent. \$70 Auxl. \$30	general practitioners, specialists, assistants, hygienists.	Dr. M.F. Williamson (604) 228-2627
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A number of courses are also being offered at the Division of Continuing Education at Boston University Goldman School of Graduate Dentistry in the Fall of 1981. For further information, please contact the CDA Resource Centre or Ms. Pamela Grindle, Asst. Program Co-ordinator, Goldman School of Graduate Dentistry, 100 East Newton Street, Boston, Mass. 02118. (617) 247-6554.

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Sponsoring Institution Address	Location of Course	Title of Course	Subject Area	Data	Style	Instructor(s)	Registration	Fee	Audience	Contact Person/ Telephone
Dalhousie University Faculty of Dentistry Halifax, N.S. B3H 3J5	Halifax, Nova Scotia	Periodontics	Periodontics	Sept. 25-26, 1981	Lecture	Dr. Jay Seibert	open		general practitioners, specialists, assistants, hygienists.	Kaireen Vaison (902) 424-2248
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Saint John, New Brunswick	Halifax, Nova Scotia	Orthodontics	Orthodontics	Oct. 23-24, 1981	Lecture	Dr. Wayne Barro	open		general practitioners, specialists, assistants, hygienists, lab technicians, other.	Kaireen Vaison (902) 424-2248
		Dental Auxiliary Utilization	Courses for auxiliaries	Nov. 6-7, 1981	Lecture, Participation	Dr. Dick Montgomery	open		general practitioners, specialists, assistants, hygienists.	Kaireen Vaison (902) 424-2248
		Occlusal Seminars Session III	Occlusion	Nov. 21-22, 1981	Lecture, Participation	Dr. Dennis Gilboe	limited		general practitioners, specialists.	Kaireen Vaison (902) 424-2248
"	"	Removable Partial Dentures	Prosthodontics	Nov. 28-29, 1981	Lecture	Dr. Paul Sils	open		general practitioners, specialists, assistants, hygienists, lab technicians, other.	Kaireen Vaison (902) 424-2248
		Periodontics	Periodontics	Sept. 25-26, 1981	Lecture	Dr. Jay Seibert	open		general practitioners, specialists, assistants, hygienists.	Kaireen Vaison (902) 424-2248
		Occlusal Seminars Session I	Occlusion	Sept. 26-27, 1981	Lecture, Participation	Dr. Peter Neff	limited		general practitioners, specialists.	Kaireen Vaison (902) 424-2248
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Harold L. Hamburg

Sedation, a tutorial style Manual of Sedative Techniques

*Quintessence Publishing Co. Inc.,
Chicago, U.S.A., 198 pages.*

Dr. Hamburg sets the tone of this practical condensed pocket manual with his opening statement, "If I were to characterize sedative technique, I would borrow the title, Much Ado About Nothing". He feels that the average dentist already has the knowledge to perform the many sedative techniques.

Each chapter leads the reader into the different types of sedation and covers the history, techniques and armentaria. There are separate sections on inhalation, intravenous intramuscular and rectal sedations and their uses, with the heaviest bias towards intravenous techniques. Patient selection and monitoring is covered and pharmacology is treated in a separate chapter.

The writing style is clear and breezy. The book is a pleasure to read and the questions at the end of each chapter, even though initially irritating make an excellent review of each chapter.

Unfortunately the book's greatest strength, its apparent simplicity, could also be its greatest weakness. Dr. Hamburg tries to remove much of the mystique surrounding intravenous sedation, but tends to make it sound so easy that he could lead some underqualified or overconfident practitioners into potentially dangerous situations. He makes light of the potential physical and psychological reactions to the drugs used and suggests that the incidence of serious problems approaches a statistical

0. But then I may be falling into the very trap of "Idol Worshipping" that Dr. Hamburg is attempting to counsel us to avoid.

On the whole, the book would be an interesting addition to the library of any general practitioner. The illustrations are clear and simple and in most cases, easily worth a thousand words. The basic philosophy of the manual may cause some of us to pause, but this is not a reference book and with reasonable caution appears hard to beat as a simple "how-to-book".

"Sedation, a tutorial style manual of Sedative Techniques" was reviewed by Dr. D.M. Perenack, Dental Clinic Lakehead Psychiatric Hospital, Thunder Bay, Ontario.

Jens J. Pindborg

Oral Cancer and Precancer

*John Wright & Sons Ltd., Bristol,
1980, 177 pages*

Dr. Pindborg, in his introduction, points out that the book is a new approach to the problem of oral cancer and precancer. The two subjects are discussed together, region by region, in an attempt to provide an over-all picture of the disease in any given site. Because not all aspects of the problem can be dealt with in each location, some material, which is common to all regions, is considered in separate chapters.

After a careful consideration of the epidemiology of oral cancer and precancer, a chapter is devoted to definitions and the most recent terminology is given. An attempt is made to discard outmoded and ambiguous nomenclature. Cancer and precancer of the lips, floor or mouth, tongue, palate, gingiva and alveolar ridge as well as intraosseous carcinoma, are dealt with in separate chapters. The epidemiology, clinical features, histopathology, aetiology and treatment are outlined

in each case and graphs and illustrations are used to clarify the points made.

There follows a chapter which discusses the malignant potential of oral precancerous lesions. The controversial subject of malignant transformation in leukoplakia is carefully examined with use of some hitherto unpublished material. The surprising fact emerges that leukoplakia in non-users of tobacco is more inclined towards malignant transformation than is leukoplakia in tobacco users. The author hastens to point out that smoking does not of course confer any protection against malignant transformation, rather the evidence suggests that leukoplasias developing from causes other than tobacco may have a greater malignant potential. The importance of speckled leukoplakia is stressed.

Only a few lines are devoted to erythroplakia in this chapter and elsewhere. Although one must admit that it is a much rarer lesion than leukoplakia, it is almost always premalignant and must surely merit more space in a book on precancer. The one illustration of this condition is not too helpful and this is not too helpful and this is perhaps one area where the extravagance of a color picture, showing the very characteristic velvety red appearance of the condition, may have been justified.

Useful chapters follow on a general consideration of oral precancerous conditions, clinical and microscopic features of oral cancer and the aetiology of oral cancer and its treatment. The final short chapters are devoted to osteoradionecrosis and other aspects of leukoplakia. There are two useful appendices, one dealing with examination and topography of the oral mucosa and the other with the T.N.M. system for staging of oral cancer.

This is an excellent small volume which gives a comprehensive overview of the state of our knowledge. Because it is written by one person it does not have the uneven style so frequently found

in many of the multi-authored books we see today which have been ineffectively "edited". It is written in clear, concise English and is very readable. All statements are backed up by up-to-date statistical data, either from the literature in general or from Dr. Pindborg's formidable collection of material. The text is clear. The illustrations, although in black and white, give, in most cases, an accurate indication of each condition represented.

The book can be recommended to every dental student, dental practitioner and physician. It is a useful handbook for both the diagnostician and treating clinician and is a worthwhile addition to the literature. One would have expected no less from a clinician/pathologist of the stature of Jens Pindborg.

"Oral Cancer and Precancer" was reviewed by Dr. Ralph I Brooke, Department of Oral Medicine, University of Western Ontario.

*Edited by M.L. Hale,
S.P. Hazen, R.E. Moyers,
D.F. Redig, H.B. Robinson
and S.I. Silverman, Chicago*

1980 Year Book of Dentistry

*Year Book Medical Publishers Inc.,
pp. 386, illus. 260: \$35.00
approximately.*

The Year Book series, in the words of the publishers, whose name is derived from their publishing specialty, "provides in condensed form the essence of the best of the recent international medical literature". The material covered in this volume represents literature reviewed up to October 1979, and accordingly is a survey of two year-old publications.

The format is a well-established one of abstracting articles, together with their most relevant illustrations, followed by brief and pithy comments by the abstractor

regarding the relevance of the article's contents to the general dental practitioner.

Virtually all fields of clinical dental interest are covered in 18 chapters ranging from "Dental and Occlusal Development" to "Anesthesia". The selection of papers reviewed, however, appears to be heavily weighted towards the fields of interest of the reviewers, who happen to be two oral surgeons, a periodontist, an orthodontist, a prosthodontist and a dental administrator. Accordingly, the majority of articles reviewed have a strong surgical bias. Of the 220 papers reviewed from 51 journals, 34 are drawn from *Oral Surgery* (the most cited journal) while 22 are drawn from the *Journal of the American Dental Association*. The *Journal of Prosthetic Dentistry* is the third most frequently cited (19 articles), while on a parochial note, the *Journal of the Canadian Dental Association* is cited but thrice.

This is obviously not a book to be read from cover to cover, and no single reviewer can be adequately expert in all the fields surveyed. Like a smorgasbord, this is a book to be tasted in small portions, relishing those excerpts of the literature of greatest personal preference, and nibbling on those topics of lesser fancy. The array of material does provide for a broadening of one's daily dental

dietary intake, even if it does not provide a fulfilling mental meal.

For the general practitioner who might never look at any of the 51 journals cited, this annual review serves some purpose in bringing belatedly to his or her attention some of the recent advances in dental science. It even provides a brief "continuing education" course in the form of a "current literature quiz" consisting of 61 questions posed at the beginning of the book, and "answers" — referring to the contents of the book, at the end. For specialists, this book might provide insights into fields other than their own.

An extensive index provides an accurate and concise guide to the subject matter covering the 1979 literature selected. Skimming the book and/or the index provides superficial coverage of a variety of topics that directs the serious reader to the cited original source.

The Yearbook Medical Publishers provide a useful service in publishing this annual review of dental literature that the conscientious practitioner might well consult as an aid in keeping up with the ever-increasing flood of publications that are required to be read by the "informed" dentist.

"The 1980 Year Book of Dentistry" was reviewed by Dr. G.H. Sperber, Professor, Dept. of Oral Biology, The University of Alberta.

Self-assessment manuals

*Vol. 1. Oral Surgery and Pathology — B. Cohen, D. Mason, D. Poswillo
Vol. 2. Oral Medicine and Diagnosis — B. Cohen, D. Mason, D. Poswillo
Vol. 3. Clinical Dentistry — A. Prophet, A. Alexander.
Approx. 80 pages each — £6.00 each.*

The care and thought that has gone into the make-up, plus the excellent illustrations make these books a good buy.

The format of each is identical, with plates or x-rays on one page and related questions on the facing page. The questions require only short answers.

These are not the type of books to be read cover-to-cover. Reading two or three pages at a time and then checking over the answers at

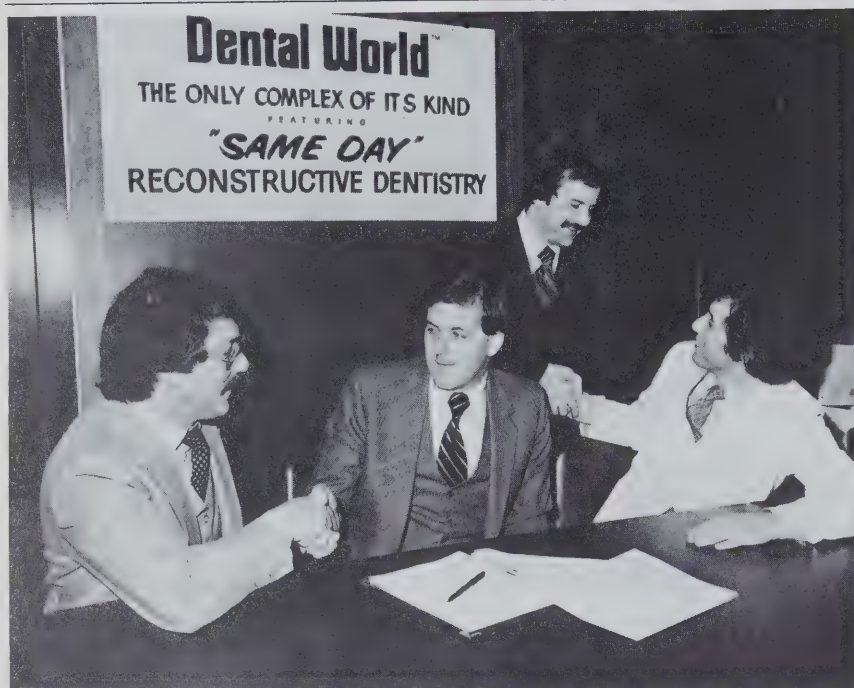
the back of the volume is perhaps the best method.

If used properly, the books are useful for revision and learning and would be a welcome addition to any practitioner's library.

Some of the x-rays lack definition, but this is the only minor fault in the manuals.

This review was prepared from notes made by Dr. R.R. Hutchinson, Corner Brook, Nfld.

"Dental World" à la conquête du Canada



M. Richard Bernstein, président de Dental World Center, Inc. (à gauche), M. Dennis Cooper, président de D.J. C. Industries Ltd. (au centre), le Dr Jerrold F. Heller (à droite) et le Dr Dennis Corbasson (debout), lors de la signature de l'entente intervenue entre Dental World Center, D.J.C. Industries et le Dr Corbasson, de Toronto, concernant la franchise de Dental World System au Canada, y compris la restauration en une journée et la marque de commerce.

Une société dentaire des États-Unis, qui désire vendre ses franchises partout dans le monde, cherche à s'entendre au nord des frontières américaines.

Richard Bernstein, président de Dental World Center Inc., de New York, prévoit que son réseau de "complexes dentaires" rapportera beaucoup au Canada.

Pour commencer, il compte ouvrir un premier complexe à l'automne dans la région de Toronto, puis 15 autres complexes ici et là au pays au cours des cinq prochaines années. Ces projets font actuellement l'objet de négociations avec plusieurs dentistes des provinces canadiennes, qui se sont montrés intéressés à acquérir une franchise, dit-il.

Toutefois, il serait peut-être prématuré de crier victoire dans le territoire même de dentistes dont la pratique a

ce qu'il y a de plus traditionnel.

Le Dr Claude Doughty, président du Royal College of Dental Surgeons of Ontario, a fait savoir au Journal qu'il ne saurait faire de commentaires sur la possibilité pour Dental World d'ouvrir un complexe dans quelques mois à Toronto.

Quoique le collège ait eu des entretiens officiels avec les représentants de la société américaine, le Dr Doughty dit n'avoir rien entendu de précis concernant la date d'ouverture. Les discussions ont porté surtout sur les conseils que pouvait apporter le collège et sur les directives à suivre pour obtenir une licence en vertu des lois actuelles.

Quoi qu'il en soit, la franchise a intéressé un dentiste de Mississauga, le Dr Dennis Corbasson qui, après plusieurs visites au siège social de Dental World, à Garden City (New York), a

décidé qu'il était temps d'introduire au pays le service dentaire "en une seule visite".

Le Dr Corbasson et son associé, Dennis Cooper, ont signé au mois de mars une entente qui prévoit un versement initial de 50 000 \$ à Dental World pour obtenir la franchise du réseau et l'usage de sa marque de commerce.

Toutefois, malgré la publicité faite jusqu'ici, communiqués de presse et photos, le Dr Corbasson refuse de parler du projet. Au Journal qui lui demandait des renseignements sur ses rapports avec Dental World, il a dit n'avoir rien à ajouter jusqu'à l'ouverture de son premier complexe... dont il doit assurer le financement en vertu de l'entente.

Mis au courant des hésitations du Dr Corbasson, M. Bernstein les a attribuées à l'attitude "conservatrice" des dentistes canadiens face aux nouveaux modes de prestation des services. "Il ne veut probablement pas faire de la poussière", dit-il.

M. Bernstein, un denturologue qui a lui-même mis au point le système de Dental World, soutient que les patients américains profitent de sa dentisterie de consommation.

Selon lui, c'est de bouche à oreille que les patients ont fait connaître les avantages qu'offre le complexe de Garden City, qui est ouvert depuis deux ans et demi. L'année dernière seulement, le complexe a traité 12 400 patients.

D'autres franchises sont déjà à l'étude. Un complexe vient d'ouvrir ses portes dans le comté de Suffolk (New York), on prévoit en ouvrir un autre en Californie et un syndicat du Massachusetts vient d'engager la société pour fournir les soins dentaires à ses 44 000 membres.

"Nous sommes très ambitieux", d'expliquer M. Bernstein.

Dental World a comme stratégie

d'atténuer la crainte, l'anxiété et la douleur du patient. Elle a pour spécialité d'offrir les soins dentaires "en une seule visite", notamment en ce qui concerne la restauration des dents: couronnes, ponts, prothèses entières ou partielles et appareils orthodontiques.

Le secret de l'opération, c'est de sauver du temps. Les spécialistes dentaires travaillent ensemble sous le même toit et ont quatre laboratoires à leur service sur les lieux.

M. Bernstein soutient que les patients sont moins nerveux s'ils savent que le traitement sera terminé le jour même. Il souligne aussi un autre avantage: en éliminant les visites nombreuses, on réduit les frais. Dental World demande un prix qui est de 22 à 25 pour cent plus bas que les frais des dentistes de pratique privée aux Etats-Unis.

"Nos frais sont établis sur le prix de revient plutôt que sur ce que le marché peut absorber, dit-il. En réduisant le nombre des visites, nous pouvons traiter plus de gens."

Dental World atténue la douleur du patient en demandant à ses dentistes d'appliquer un anesthésique d'appoint avant de faire une injection. Les patients sont incités à se détendre en regardant la télévision ou en écoutant de la musique avec des écouteurs stéréophoniques.

"Il s'agit d'amener le patient à entrer dans l'établissement pour se faire traiter, de dire M. Bernstein. C'est là toute la question."

Tout le personnel de Dental World: dentistes, denturologues, hygiénistes et assistants dentaires, doit faire un stage de formation. Tous reçoivent un salaire; il n'y pas d'association. Les dentistes engagés par la société doivent avoir au moins trois ans d'expérience. Certains l'ont acquise dans l'armée ou autrement, comme résidents à l'hôpital.

M. Bernstein voudrait appliquer au Canada les mêmes règlements qui régissent ses franchises aux Etats-Unis. Il admet cependant que cela pourrait entraîner certaines difficultés, notamment en ce qui a trait aux honoraires qui sont très bas, à leur affichage et à la publicité qui entoure toute l'opération. Mais, il ne s'en inquiète pas outre mesure.

"Nous observerons les lois du pays, dit-il, mais nous tenterons aussi de les faire modifier si nous trouvons qu'elles ne sont pas équitables envers le consommateur."

La pierre angulaire de Dental World, c'est l'excellence des services dentaires, de dire M. Bernstein. A cette fin, les complexes font l'objet d'une inspection mensuelle et les dentistes (ou gestionnaires) qui font piètre figure risquent de perdre leur franchise.

Les détenteurs de franchise ne sont pas tenus de verser à Dental World un pourcentage de leurs recettes brutes. Ils paient plutôt un seul droit de fran-

chise puis, occasionnellement, ils participent à certains frais de la société comme ceux du marketing. Puisque le Dr Corbasson a acheté la franchise et la marque de commerce pour le Canada, c'est avec lui et son partenaire, M. Cooper, que les dentistes canadiens devront traiter directement.

M. Bernstein reconnaît qu'au Canada les dentistes et le détenteur de la franchise pourraient s'associer, mais il le déconseille. Il préfère que les dentistes reçoivent un salaire plutôt que d'avoir à travailler sous pression.

Dental World regarde l'avenir avec ambition. M. Bernstein espère établir des complexes dentaires partout dans le monde. La société a déjà des représentants auprès des gouvernements d'Afrique occidentale pour y négocier des franchises.

Et, selon M. Bernstein, Dental World aura toujours le même but: contenir les frais des services dentaires et amener le consommateur au dentiste.

L'Ordre du mérite militaire au Dr Thompson

Le brigadier-général W.R. Thompson, C.D., membre du Bureau des gouverneurs de l'ADC, a été fait commandeur de l'Ordre du mérite militaire, en reconnaissance de ses états de service et de son dévouement au sein des Forces canadiennes. C'est la reine qui est chef suprême de l'Ordre qui a été créé en 1972.

Le Dr Thompson, qui est directeur général des Services dentaires au Ministère de la défense nationale, s'est dit "heureux et surpris" d'un tel honneur.

Il fait partie des forces militaires depuis 36 ans et a servi dans l'armée et

dans la marine au cours de la Deuxième guerre mondiale, d'abord comme assistant dentaire puis à titre de navigateur aérien. Après la guerre, il a fait ses études dentaires à l'Université de Toronto et a obtenu son diplôme de la Faculté de médecine dentaire en 1949.

Le Dr Thompson, qui est originaire de Campbellford (Ontario), sera investi des insignes de son nouveau titre au cours d'une cérémonie spéciale que présidera le très honorable Edward Schreyer, gouverneur général du Canada et chancelier de l'Ordre.

Main-d'oeuvre dentaire: des répercussions étendues

Exposé de M. Hubert Drouin, directeur général de l'ADC, devant le Comité consultatif fédéral-provincial de la main-d'oeuvre de la santé.

Au Canada, la médecine dentaire doit relever de nouveaux défis fort importants. Après en avoir connu une grande rareté, elle fait maintenant face à un surplus de main-d'oeuvre qui augmente constamment. Une telle évolution touche profondément non seulement les dentistes qui doivent se résister devant le problème, mais aussi les auxiliaires dont le besoin diminue. Enfin, elle a des répercussions sur l'organisation de la pratique privée.

Diverses études économiques ont su déceler, à juste titre, que la médecine dentaire s'orientait vers des changements radicaux. La situation varie quelque peu d'une province à l'autre mais, en général, on reconnaît dans tout le pays que, si de moins en moins de dentistes se plaignent d'être trop occupés, le nombre de ceux qui disent ne pas l'être suffisamment a augmenté en flèche au cours de la dernière décennie. Ce manque de travail touche au plus haut point les jeunes dentistes. Leur situation est telle que les nouveaux diplômés préfèrent de plus en plus s'associer à une pratique déjà établie que d'ouvrir immédiatement leur propre cabinet.

Il est vrai que le problème est attribuable, en partie, à l'augmentation du nombre des dentistes et à un ralentissement de la croissance démographique dans la plupart des régions. Comparativement au début des années 60, on compte aujourd'hui au Canada près de 1 000 patients possibles de moins par dentiste licencié. Toutefois, malgré cette baisse du rapport population-dentiste, les données démographiques n'expliquent pas entièrement le problème. D'autres fac-

teurs importants sont intervenus en ce qui concerne tant l'offre que la demande.

Notons d'abord qu'au cours des deux dernières décennies, les dentistes n'ont pas qu'augmenté en nombre, ils ont aussi accru leur productivité, contribuant ainsi à créer une surabondance de l'offre en matière de services dentaires. La pratique individuelle est en voie de disparaître rapidement.

L'association, la pratique collective et le partage des coûts sont de plus en plus populaires pour bien des raisons: premièrement, le partage des frais de bureau ou du salaire des employés offre certains avantages pécuniers; deuxièmement, en se regroupant ou en se partageant les frais, les dentistes peuvent profiter plus facilement des nouveaux équipements plus raffinés; troisièmement, les dentistes qui pratiquent seuls ne peuvent pas toujours utiliser pleinement les auxiliaires, tels l'hygiéniste ou la secrétaire-réceptionniste, contrairement à ceux qui pratiquent en groupe, sous une forme ou une autre. A cause de la quantité de leurs patients, ils peuvent utiliser à plein temps un hygiéniste ou un secrétaire-réceptionniste.

La pratique collective offre des avantages tels qu'on peut prévoir que, d'ici la fin des années 80, à peine 25 ou 35 pour cent des dentistes continueront de pratiquer individuellement, et tout probablement dans les régions rurales ou à faible densité de population.

La hausse de la productivité, que permettent les nouvelles formes de pratique, a aussi entraîné au cours des dix dernières années une diminution de la moyenne des heures de travail. Ceci ne signifie pas pour autant que le dentiste soigne moins de patients: s'il passe moins de temps dans son cabinet, il a accru sa productivité et, en fait, il peut servir plus de patients dans une même période de temps.

En ce qui a trait à la demande de services dentaires, les facteurs sont plus difficiles à établir et ils se contredisent dans une certaine mesure. Les programmes de soins dentaires de certaines provinces dispensés pas des in-

firmiers, réduisent le nombre de patients possible encore plus que ne l'indique le rapport population-dentiste. L'augmentation de la fluoruration et l'expansion des soins préventifs font entrevoir une diminution de la demande de certains services, notamment les chirurgies buccales les plus simples. La demande engendrée à grands flots par l'introduction des régimes d'assurance dentaire ira en s'atténuant, à moins que ces régimes ne connaissent une croissance continue. Enfin, si le taux d'inflation se maintient dans les deux chiffres, comme on peut le prévoir facilement à court terme, compte tenu du revenu réel dont il peut disposer, d'autres besoins exerceront sur le patient non assuré des pressions qui affecteront fortement la demande de services dentaires.

De façon plus positive, cependant, la diminution de la demande de soins dentaires chez les enfants peut être compensée par une augmentation chez les adultes qui, plus sensibilisés à la question, désireront garder leurs dents naturelles aussi longtemps que possible et demanderont plus de soins en endodontologie et en parodontologie ainsi que de poses de couronnes et de ponts.

Bref, au cours des prochaines décennies, la demande de services dentaires sera soumise à des influences contradictoires et il est difficile de prévoir à quel rythme elle augmentera. On peut cependant penser que la nature des services demandés variera au cours des cinq ou dix prochaines années et que l'offre de services continuera d'augmenter plus rapidement que la demande.

Cette surabondance de l'offre amènera automatiquement les dentistes à revoir l'organisation de leur pratique. On peut penser que, s'ils ont moins de travail, ils diminueront le nombre des chaises ou les dimensions du cabinet. Il est tout probable qu'à la fin des années 80, on comptera en général deux chaises par dentiste, contrairement à la tendance des années 60 et 70 où on en comptait davantage.

L'état de l'offre et de la demande incite fortement à recourir avec plus de modération aux services des auxiliaires. Moins occupés, les dentistes voudront tout aussi bien faire le travail eux-mêmes. Et alors, ce sont les auxiliaires les mieux formés qui risquent de partir les premiers. S'ils sont en perte de vitesse, les auxiliaires peuvent cependant reprendre de l'importance avec l'avènement de nouvelles organisations plus complexes, telle les pratiques collectives, qui pourront utiliser pleinement leurs talents.

L'Association dentaire canadienne joue un rôle de premier plan dans ce milieu qui connaît une évolution rapide. Elle sert de lien entre les provinces pour donner à la profession une voix forte sur le plan national. En matière d'information, elle peut présenter une vue d'ensemble qui est essentielle. L'étude de Don Lewis en Ontario, celle de Peat, Marwick & Partners dans les provinces de l'Ouest et celle de l'Université Dalhousie dans les provinces de l'Atlantique cherchent toutes à comprendre sérieusement le problème de la main-d'oeuvre dentaire dans leurs régions respectives. L'ADC peut compléter ces efforts à l'avantage de tous en indiquant les tendances générales, en soulignant les orientations qui semblent se faire jour dans certaines provinces et en y apportant des renseignements additionnels, dont certains s'obtiennent mieux dans une perspective nationale. A titre d'exemple, l'Association fait en 1981-1982 une étude sur les déplacements de la main-d'oeuvre dentaire au Canada, qui lui permettra d'évaluer la situation relative des provinces face à ce problème et en fera voir la corrélation.

L'ADC assume, dans d'autres domaines, des fonctions importantes qui ont un effet direct sur la main-d'oeuvre. Par ses programmes d'éducation qui ont une envergure nationale, telle la campagne du Mois national de la santé dentaire, elle aide la population canadienne à mieux saisir l'importance de garder ses dents en bonne santé. Elle contribue ainsi à

améliorer, dans l'ensemble, la santé et le bien-être des Canadiens en général, tout en les incitant à se faire examiner et traiter les dents de façon régulière.

Enfin, et ceci est très important, à titre d'organisme national, l'Association est la mieux placée pour traiter à bon escient et succinctement des questions politiques au niveau fédéral. Ses activités viennent compléter celles qui se font dans les provinces. En regroupant les nombreux intérêts régionaux dans le domaine, l'Association crée une communauté dentaire plus cohérente et lui sert de porte-parole dans le dialogue qui se poursuit sur le plan national, pour finalement améliorer les relations entre la profession dentaire, le gouvernement et le public en général.

L'ADC est heureuse de s'entretenir avec vous aujourd'hui. Elle croit avoir un rôle continu à jouer dans le contexte des attributions du comité. S'il y a nettement beaucoup de problèmes à régler dans le domaine de la main-d'oeuvre, l'ADC est prête à en relever le défi, dans l'esprit de collaboration fédérale-provinciale qui anime le comité.

Pas de solution assurée

La situation de la main-d'oeuvre dentaire en Ontario est si complexe qu'elle ne se prête pas à des solutions simples et faciles.

Telle est la conclusion du sommaire que le Dr D.W. Lewis a fait d'une vaste étude de la question dans cette province.

Le Dr Lewis ajoute, cependant, qu'il ne faut pas s'offoler devant la "crise de la main-d'oeuvre dentaire" qui, à son avis, ne signifie pas que danger mais suscite également certaines possibilités.

"Dans cette perspective, compte tenu des repercussions à longue échéance que les changements mis en oeuvre maintenant peuvent avoir sur

l'orientation des services dentaires au cours des années, il est très important de fonder toute initiative nouvelle sur les possibilités qu'ils offrent plutôt que sur la peur et la crainte qu'engendre une vision étroite et immédiate... Le danger, c'est de prendre précipitamment des décisions qui sont fondées sur la peur, le pouvoir, le rang social ainsi que sur des raisons économiques et politiques, entraînant l'établissement de systèmes de prestation de services déraisonnables qui ne serviront pas l'intérêt général. Eviter ce danger présente un véritable défi."

L'étude, intitulée "Research into Dental Manpower in Ontario", a été financée par le Ministère de la santé de l'Ontario. Elle comprend 16 rapports, en plus du sommaire préparé par le Dr Lewis, du Groupe de recherche sur les services dentaires à l'Université de Toronto. Le travail a pris 31 mois.

Les disponibilités de main-d'oeuvre dentaire ont connu des "changements importants" entre 1968 et 1978 en Ontario, de dire le sommaire.

Le nombre des assistants dentaires diplômés a doublé; celui des dentistes licenciés a augmenté d'environ 35 pour cent et celui des hygiénistes dentaires, de 290 pour cent, tandis qu'on a reconnu officiellement les denturologues, les assistants spécialisés en soins préventifs et les hygiénistes spécialisés en restauration dentaire. Entre temps, la population n'a augmenté que de 20 pour cent.

Par contre, l'accroissement de la productivité et l'augmentation du nombre des dentistes ont haussé la capacité des services de soins dentaires. En outre, en augmentant le rapport entre la main-d'oeuvre dentaire et la population, on a aussi amélioré la répartition du personnel.

"... La population a ou aura, géographiquement et économiquement, meilleur accès aux soins dentaires, à cause des améliorations apportées à la disponibilité et à la répartition du personnel, de même qu'aux régimes d'assurance dentaire.

“... Le ralentissement de la croissance démographique et le vieillissement de la population — les personnes âgées ont relativement moins recours aux services et ne portent pas les mêmes assurances — laissent croire que dans l'ensemble la demande de soins par habitant baissera. Toutefois, certains pensent que, parce qu'elles garderont leurs dents naturelles plus longtemps que par le passé, les personnes âgées auront davantage recours aux soins dentaires qu'actuellement. L'amélioration de la santé dentaire aura, sur la demande, un double effet.”

Ceux qui se font entretenir les dents régulièrement demanderont moins de travail et, vraisemblablement, moins de soins, à moins de profiter des assurances ou de prodiguer des soins inutiles.

Ceux qui ne se font soigner que “sur symptôme” présenteront probablement moins de problèmes et demanderont moins de soins.

“Quoi qu'il en soit, comme on l'a mentionné pour les personnes âgées, une population qui aura de meilleures dents aura besoin de soins dentaires plus longtemps mais ses besoins varieront. C'est dire qu'au cours d'une vie, la demande de soins dentaires ne diminuera vraisemblablement pas à cause d'un meilleur état buccal.”

Dans les diverses études, les prévisions de l'offre et de la demande pour 1981, 1986, 1991 et 1996 varient selon les perspectives.

Elles indiquent cependant que l'offre de services augmentera sans cesse et à un rythme beaucoup plus grand qu'actuellement ou que par le passé.

Selon les critères établis par Lave, Lave et Leinhardt, le rapport dentistes-patients s'est amélioré en Ontario et continuera de le faire si le nombre des nouveaux diplômés se maintient d'une année à l'autre. Ce rapport était d'un dentiste par 2 427 de population en 1968 et on prévoit qu'il passera à un par 1 599, en 1996.

Le rapport note aussi qu'à moins d'y voir, les dentistes verront leurs revenus diminuer alors qu'ils aug-

menteront en nombre, quoiqu'on n'ait trouvé aucune indication en ce sens jusqu'en 1978.

Dans son sommaire, le Dr Lewis précise: “L'étude sur la main-d'oeuvre donne, surtout dans les autres rapports, beaucoup de renseignements sur les fournisseurs de soins dentaires en Ontario et la nature de leur travail,

de même que sur les attitudes et les habitudes de la population en ce qui a trait aux soins dentaires. Cette information est importante, mais elle n'est pas mise en évidence et risque de passer inaperçue, parce que ce qui retient davantage l'attention c'est la perspective d'une grande surabondance de personnel dentaire en Ontario”.

Un Mois de la santé dentaire bien réussi!



Le choix des gagnants du concours de dessin du Mois national de la santé dentaire 1981 s'est fait au siège social de l'ADC à Ottawa. De gauche à droite: M. Bruce Rawlins artiste; le Dr Michel Carvonis président de la campagne; M. Hubert Drouin, directeur général de l'ADC.

Le Mois national de la santé dentaire 1981 a été une réussite.

En se disant très heureux du résultat de sa première campagne, le Dr Michel Carvonis, président, a souligné la participation de tous, associations dentaires provinciales, sociétés locales, hygiénistes et assistants dentaires, qui se sont donné la main pour propager la bonne parole de la santé dentaire.

Le Dr Carvonis a fait remarquer notamment la participation accrue des médias, qui ont accordé une plus grande couverture à la campagne d'avril, diffusant ainsi le message “Un sourire, un ami” d'un bout à l'autre du pays.

Malgré la réussite, le président de la campagne note qu'il reste encore beaucoup à faire, cependant. “Nous devons être encore plus efficaces l'an prochain, dit-il. Et j'accueillerai toute suggestion que me feront les dentistes sur les moyens d'y arriver.”

Les journaux canadiens ont publié plus de 180 articles informant la population que le mois d'avril était celui de la santé dentaire au pays. Les postes de radio français et anglais ont répondu généreusement à l'appel que l'ADC leur avait fait de diffuser gratuitement huit topos sur la santé dentaire. Ils ont ainsi contribué à la campagne une valeur d'au moins 8 800 \$ en temps d'antenne.

Pour la deuxième année consécutive, l'ADC a diffusé dans chaque province des topos de télévision mettant en vedette Shari Lewis et portant le nom de l'association provinciale comme celui de l'association nationale. Ces topos de 30 secondes ont aussi été distribués aux réseaux CBC, CTV et Global sous l'égide de l'ADC.

Afin d'atteindre un auditoire encore plus grand, l'ADC a produit un topo de télévision en langue française, qui sera diffusé au cours de la campagne de 1982. Il met en vedette un acteur québécois bien connu des jeunes, Claude Steben (le capitaine Cosmos), qui dans une courte ritournelle rappelle aux enfants de se brosser les dents.

La participation des médias à la campagne de 1981 a compris aussi des entrevues avec des membres de la profession dentaire, qui ont été diffusées sur les ondes locales de la radio et de la télévision, et sur les postes de la câblodistribution.

La campagne a aussi reçu un appui très fort sur le plan provincial, si l'on en juge par la popularité des dossiers d'information, qui ont été distribués gratuitement et qui contenaient des articles de journaux, des suggestions pour la publicité, les discours et la planification de la campagne elle-même.

Les associations dentaires provinciales ont commandé 368 dossiers en langue anglaise, 57 de plus que l'année précédente, tandis que la demande pour les dossiers de langue française est passée de 104 en 1980 à 206 en 1981. De même, l'association des hygiénistes et celle des infirmières et des assistants dentaires ont reçu 22 dossiers et il a fallu répondre à un grand nombre de demandes de la part d'écoles, de services de santé et de groupes communautaires.

La vente du matériel publicitaire a aussi augmenté. Celle des affiches a plus que doublé, passant de 43 500 affiches anglaises et 2 500 françaises en 1980 à 91 000 dans le premier cas et 11 000 dans le deuxième, en 1981. La

vente des décalques a aussi bien marché: 118 000 en anglais et 172 000 en français.

Six provinces: la Colombie-Britannique, l'Alberta, la Saskatchewan, l'Ontario, la Nouvelle-Ecosse et Terre-Neuve ont participé au concours de dessin du Mois de la santé dentaire 1981, qui comprenait trois catégories: école maternelle et première année; de la 2^e à la 4^e année; de la 5^e à la 7^e année.

Le choix des gagnants s'est fait au siège social de l'ADC, à Ottawa, et ce n'est pas sans une longue délibération que les juges, M. Hubert Drouin, directeur général de l'Association, le Dr Michel Carvonis, président de la campagne, et M. Bruce Rawlins, artiste commercial d'Ottawa, ont rendu leur décision.

Voici le nom des gagnants: Leanne Frey, élève de première année à Seven Persons (Alberta), Marney Leslie, élève de quatrième année à North Battleford (Saskatchewan), Robbie Meikle, élève de cinquième année à Calgary (Alberta), recevront chacun une bicyclette de l'ADC.

La participation locale au Mois de la santé dentaire a elle aussi été considérable, à en juger par la demande des dentistes désireux de décerner des certificats officiels d'appréciation à leurs concitoyens et aux organismes communautaires. L'ADC a ainsi distribué, en français et en anglais, plus de 285 certificats au nom de personnes et de groupements qui ont aidé de façon particulière au bon déroulement de la campagne.

Deux sociétés nationales ont également participé généreusement: Commonwealth Holiday Inns du Canada Limitée a affiché le Mois national de la santé dentaire sur ses babillards; les Restaurants McDonald, d'Ontario, ont fait imprimer le dessin de la campagne sur leurs napperons.

Le Dr Carvonis en conclut que la collaboration apportée par les dentistes au cours de la campagne de cette année prouve que la profession peut relever le défi d'améliorer la santé dentaire des Canadiens.

Rayons X: Attention aux appareils défectueux

Santé et Bien-être Canada vient d'émettre un avertissement concernant certains appareils de radiographie dont la minuterie est défectueuse.

L'avis mentionne la minuterie Digi-time HDT-3004 des appareils Siemens Heliodent 70 qui peuvent continuer d'émettre des rayons X au-delà du temps prévu et surexposer le patient à la radiation, si la personne préposée à la radiographie ne s'en aperçoit pas.

Il faut donc bien faire attention, la minuterie ne fait pas toujours défaut. Le communiqué précise qu'on se rendre compte de la défectuosité si le film de la radiographie devient trop sombre.

L'Association dentaire canadienne a appris l'avertissement par les médias plutôt que d'en être informée directement par la Direction générale de la protection de la santé du ministère.

Le président, le Dr Gilbert Utas, a aussitôt écrit au sous-ministre, M. Larry Fry, pour lui exprimer le mécontentement de l'Association sur cette façon de faire.

Le Dr Utas précise que la diffusion du communiqué aux médias, avant même d'en avoir informé la profession, risquait de causer des embarras à l'Association et à ses membres. "Qui plus est, dit-il, cette façon de faire risque d'alarmer le public outre mesure, de le rendre moins enclin à se faire soigner les dents et de saper la confiance qui doit exister entre le patient et son dentiste."

Notant que les communications s'étaient améliorées entre le gouvernement et la profession, le Dr Utas souligne que, tout en fournissant l'information technique, l'avertissement

aurait pu se faire de façon à "prévenir les craintes du patient et les situations embarrassantes".

L'Association dentaire de l'Ontario a aussi prévenu ses membres du danger qui, précise-t-elle, ne concerne que les modèles 3004 et 3005.

En cas de problème, il faut déclencher le commutateur "deadman" pour réduire au minimum le temps d'exposition du patient. En augmentant ou en diminuant le réglage de l'appareil de trois ou quatre pulsations (pour le modèle 3004) ou d'un "stop" (pour le modèle 3005), on peut rétablir la situation.

Les dentistes peuvent obtenir plus de renseignements auprès du Directeur, Bureau de la radioprotection, Direction de l'hygiène du milieu, Direction générale de la protection de la santé, Confederation Heights, Ottawa (Ontario), K1A 1C1, ou en téléphonant au (613) 998-9046.

Prévoir les cas d'urgence

La meilleure façon de prendre en main une urgence médicale au cabinet du dentiste, c'est encore de la prévoir.

Selon le Dr Russell W. Bessette, dentiste et médecin américain qui donne beaucoup de conférences sur la question, les dentistes peuvent reconnaître les patients qui présentent des "risques médicaux" en établissant bien leur histoire médicale.

Personnellement, il préfère mettre cette histoire par écrit sur un formulaire qu'il fait signer par le patient.

"Ceci offre un certain avantage surtout de nos jours où les litiges se multiplient", dit-il.

Rappelant que ce document doit être constamment mis à jour, le Dr

Bessette souligne l'importance de bien indiquer si le patient prend des médicaments, s'il est sous les soins du médecin ou s'il a des allergies.

Il importe aussi de savoir si le patient a déjà été hospitalisé et pourquoi, s'il souffre de troubles cardio-respiratoires, d'apoplexie, de maladie du système nerveux, d'hépatite ou d'une maladie contagieuse.

Si le patient prend des médicaments, de dire le Dr Bessette, le dentiste doit en connaître l'effet principal et les effets secondaires possibles.

"Face à une urgence médicale, dit-il, il vous faut le savoir, l'équipement et la capacité d'agir. Ce qu'il faut savoir avant tout, c'est de faire un intra-

La trousse d'urgence médicale

Selon le Dr Russell W. Bessette, dds, md, la trousse d'urgence du cabinet du dentiste devrait comprendre les éléments de base énumérés ci-dessous. Les médicaments qu'elle contient ont une bonne marge de sécurité et peuvent sauver des vies, s'ils sont bien utilisés. Ils peuvent tous se conserver pendant au moins un an.

Le Dr Bessette ajoute qu'il faut bien comprendre que la trousse doit être gardée ensemble à un endroit précis du cabinet et vérifiée régulièrement.

- Adrénaline (1 ampoule de 1 ml., concentration 1/1,000)
- Valium 10 mg (1 ampoule de 2 cc)
- Solution lactée de Ringer (1 injection de 500 ml.)
- Infusion papillon (7/8" x 19 G)
- Tube à transfusion avec attache "Cair"
- Tampons preps à l'alcool

- Tourniquet en caoutchouc
- Injection de 50 ml. de bicarbonate de soude à 8.4% avec une seringue munie d'une aiguille de 1-1/2" (18 G)
- Injection de 50 ml. de dextrose avec une seringue munie d'une aiguille de 1-1/2" (18 G)
- Comprimés de nitroglycérine de 0.4 mg. 1/150 gr.)
- Ampoules de gaz ammoniac à respirer
- Seringue de 3 c.c. avec aiguille de 1-1/2" (20 G)
- Sac à réanimation
- Canule airway pour enfant et adulte
- Source d'oxygène pouvant fournir un débit de 6 litres pendant 45 minutes
- Stéthoscope
- Appareil à mesurer la pression sanguine
- Seringue tuberculine de 1 c.c. avec aiguille de 25 G

Le Dr. Bessette suggère aussi au dentiste et à son personnel de revoir le diagnostic et le traitement à administrer dans les cas les plus communs que voici:

- Syncope
- Angine de poitrine
- Arythmie cardiaque
- Infarctus du myocarde
- Asthme
- Coma diabétique
- Epilepsie
- Réactions psychotique
- Allergie
- Difficulté respiratoire due à:
 - emphysème
 - arrêt cardiaque
 - surdosage de médicament
 - obstruction des voies respiratoires
- Urgences hémorragiques
- Crise d'hypertension
- Attaque d'apoplexie

veineuse à un patient dès le début de la situation d'urgence."

Avant de traiter une urgence, il faut d'abord en poser le diagnostic. Le Dr Bessette conseille de vérifier les signes vitaux: la température (peau moite ou chaude), le pouls (régulier ou irrégulier), la respiration (faible ou profonde) et la pression artérielle.

Ces renseignements de base, dit-il, permettent de poser un diagnostic préliminaire et d'établir un plan d'intervention. Il souligne que chaque

dentiste doit avoir son propre plan pour faire face aux diverses situations d'urgence médicale, compte tenu de la formation et de l'expérience de son personnel.

"Quels que soient les plans et les modalités d'intervention qui ont été formulés, dit-il, il faut s'y exercer sur place pendant les périodes de formation ou d'étude. Il importe de bien répartir d'avance les responsabilités et les tâches de chacun en cas d'urgence."

A titre d'exemple, il suggère que le dentiste veille au diagnostic et au trai-

tement d'urgence, pendant que les auxiliaires voient à vérifier les signes vitaux et à mettre en place la trousse d'urgence. Il suggère aussi que la secrétaire s'occupe d'appeler l'ambulance pour faire transporter le patient à l'hôpital.

Le Dr Bessette ajoute que le dentiste et son personnel doivent mettre au point dans le détail la mise en place d'une intraveineuse, la réanimation cardiorespiratoire et l'administration des médicaments appropriés.

Merci aux auteurs des brochures et dépliants de l'ADC

L'Association dentaire canadienne a, dans son mandat, la mission de fournir à la profession et au public une information à jour sur les soins dentaires.

Pour s'acquitter de cette responsabilité, elle a entrepris en 1979 de réviser sa série de brochures et de dépliants qui ont pour but d'aider les dentistes à éveiller l'attention de leurs patients en matière de santé buccale.

Elle a ainsi mis à jour plus de la moitié de ses publications qu'on peut se procurer dans les deux langues officielles. Et le travail se poursuit quant au reste. Tout ceci, cependant, ne saurait se faire sans la participation généreuse des associations dentaires provinciales, des facultés de dentisterie ni des auteurs eux-mêmes.

Il convient de souligner ici de façon toute particulière le travail du Dr Earl Freidin, un dentiste de Saskatoon (Saskatchewan), qui a su inviter et encourager ses collègues d'un bout à l'autre du pays à participer, à titre d'auteurs, au programme de révision des publications, ainsi qu'à les guider à maintes reprises. Il a fait plusieurs suggestions pour illustrer les publications de dessins et de photos. Il a accumulé suffisamment de correspondance pour remplir plusieurs classeurs et il a conseillé le personnel dans la mise au point de toutes les nouvelles publications.

Ancien membre du Conseil des ser-

vices d'information qui est responsable de la révision, le Dr Freidin a maintenant délaissé ses responsabilités à ce sujet. Sa contribution lui vaut cependant toute la reconnaissance de la profession.

Une pléiade de collaborateurs, animés par le Dr Freidin, nous ont aidé dans le travail. Les voici.

LES RADIOGRAPHIES DENTAIRES MONTRENT DES PROBLÈMES CACHÉS

Préparé avec la collaboration de l'Académie canadienne de radiologie buccale et rédigé par le Dr Alex Ruprecht, ce dépliant traite des avantages et de la sécurité des radiographies dentaires. Le Dr Ruprecht est professeur et chef du département de diagnose et de radiologie buccale au Collège de dentisterie de l'Université de la Saskatchewan. Il est également secrétaire de l'Académie canadienne de radiologie buccale et collabore au Journal de l'ADC à titre de spécialiste en radiologie.

FLUORATION: LES FAITS PARLENT D'EUX-MÊMES

S'appuyant sur plusieurs rapports nationaux et internationaux, cette brochure décrit comment la fluoration de l'eau potable aide à prévenir la carie dentaire. Elle a été rédigée par le Dr Ralph Burgess et M. Lloyd Bowen. Le premier est professeur et président du département de dentisterie préventive à l'Université de

Toronto, le deuxième est l'agent de fluoration de l'ADC.

ASSURANCE DENTAIRE: LE GUIDE DU CONSOMMATEUR

Devant la popularité croissante des régimes d'assurance dentaire, cette brochure cherche à en faire comprendre le fonctionnement. Elle est l'oeuvre du Dr Clyde Covit, président sortant de l'ADC, qui a également occupé plusieurs postes au sein de l'Association des chirurgiens-dentistes du Québec, dont la présidence et celle du conseil d'administration.

LA SANTÉ DENTAIRE GRÂCE À UNE BONNE ALIMENTATION

Surtout attrayant pour les enfants, ce dépliant donne une aperçu des aliments à déconseiller au double point de vue nutritif et dentaire. L'auteur en est le Dr Maret Truuvert, dentiste de Toronto et ancien membre du département de dentisterie préventive à l'Université de Toronto.

PRÉCAUTIONS À PRENDRE APRÈS UNE CHIRURGIE BUCCALE MINEURE

Ce feuillet a été préparé avec la collaboration de l'Association canadienne des spécialistes en chirurgie buccale et maxillo-faciale et indique ce qu'il faut faire face aux symptômes qui peuvent se manifester après une chirurgie buccale. Il a été rédigé par le Dr Alan Ross, professeur associé au département d'anesthésie et de chirurgie buccales, au Collège de den-

Les Actualités

tisterie de l'Université de la Saskatchewan.

MENACE PENDANT LE SOMMEIL!

Édité par la Division de la dentisterie de l'Hôpital pour enfants de l'Est de l'Ontario, à Ottawa, et publié par l'ADC, ce dépliant traite de la carie du nourrisson. Il a été rédigé par Mme Dale Scanlon, hygiéniste à la clinique dentaire de l'hôpital, et le Dr D.J. Kenny, ancien directeur de la dentisterie à cet endroit. Le Dr Kenny occupe maintenant le même poste au Hospital for Sick Children, de Toronto.

SOUFFREZ-VOUS DE PÉRIODONTITE?

Édité avec la participation de la Société canadienne de périodontologie, ce dépliant décrit les causes et le traitement de la périodontite. Il a été rédigé en collaboration par le Dr David Singer, professeur et chef du département de périodontologie au Collège de dentisterie l'Université de la Saskatchewan, le Dr Claude Ibott, périodontiste de Regina, le Dr Harvey Friedman, professeur associé de pathologie à l'Université de Toronto, et le Dr Samuel Newman, associé en dentisterie au département de périodontologie de l'Université de Toronto.

PROTÉGEZ VOTRE BOUCHE!

Certains éléments de ce dépliant avaient déjà été publiés par l'Association dentaire de l'Ontario et d'autres, par le Ministère de la santé de l'Ontario. Il a été préparé sous la responsabilité principale du Dr Frank Pulver, secrétaire-trésorier de l'Académie canadienne de pédiodontologie, et l'Association canadienne de normalisation y a apporté une participation inestimable en recommandant divers genres de protecteurs buccaux pour les sports.

SAUVEZ VOS DENTS — ATTAQUEZ-VOUS À LA RACINE DU MAL

Ce dépliant a été préparé avec la participation de l'Académie canadienne d'endodontie et explique les avantages du traitement de canal. Il a été rédigé par deux spécialistes du

domaine, le Dr George Citrome, d'Ottawa, et le Dr Rosemary Lear, de Vancouver.

VOUS CHOISISSEZ UNE CARRIÈRE? POURQUOI PAS LA DENTISTERIE

Cette brochure sert d'introduction à la profession dentaire pour les étudiants qui songent à y faire carrière. L'auteur en est le Dr W.H. Feasby, du département de dentisterie pédiatrique à l'Université Western Ontario. Le Dr George Peacock, secrétaire-trésorier et registraire du Collège des chirurgiens-dentistes de la Saskatch-

ewan, de même que le Collège de dentisterie de l'Université de la Saskatchewan y ont fourni les photos. Tous les membres corporatifs de l'ADC y ont également participé.

PRATIQUES D'HYGIÈNE POUR GARDER UNE BOUCHE SAINE

Ce dépliant complète celui intitulé "La santé dentaire grâce à une bonne alimentation" et a été rédigé par les auteurs de "Souffrez-vous de périodontite?" Il sert de suivi aux conseils sur l'alimentation en décrivant les façons élémentaires de se brosser les dents ou d'utiliser la soie dentaire.

Subvention de recherche au Dr C. Clark

Le Dr Christopher Clark, de la Faculté de médecine dentaire à l'Université McGill, a reçu une subvention de 17 200 \$ de Santé et Bien-être Canada pour poursuivre ses recherches sur l'efficacité générale des enduits de fluor.

La somme, qui lui a été versée en vertu du programme d'aide à la recherche et au développement sur la santé, lui permettra d'établir lequel des deux produits du genre actuellement sur le marché, Duraphat ou Fluor-Protector, est le plus efficace.

Avec la participation du Dr W. Paul Lang, de la division des soins dentaires au Service de la santé de Détroit, le Dr Clark avait été chargé récemment de faire une étude exhaustive sur la fluoruration dont le rapport en deux volets: "La fluoruration de l'eau au Canada, compte rendu de 1980" et "La fluoruration de l'eau: Analyse de certaines critiques" a été publié dans les numéros de février et mars du Journal de l'ADC.

Mme Monique Bégin, ministre de la Santé et du Bien-être, a annoncé récemment que le budget prévu pour le programme d'aide à la recherche et au développement sur la santé avait été augmenté d'un million de dollars,

portant le budget de l'exercice en cours à 11 millions.

Le programme a pour objet d'appuyer la recherche scientifique de grande qualité et de permettre à Santé et Bien-être Canada d'acquérir plus de renseignements.

Le programme permet, en outre, de décerner des prix pour la formation du personnel de recherche, en vue d'encourager et de soutenir la création et la mise sur pied d'un cadre canadien pour les chercheurs de grande compétence.

Les prix viendront en aide à ceux qui veulent parfaire leur formation de chercheurs dans des domaines touchant de près à la santé publique et aux services d'hygiène. Les récipiendaires ont l'obligation morale de se consacrer à la recherche au Canada dans les domaines visés par les objectifs du programme, une fois leur formation terminée.

Les personnes intéressées à obtenir plus de renseignements sur le financement de la recherche ou sur les prix pour la formation des chercheurs peuvent s'adresser au responsable du programme national de recherche et de développement sur la santé, Ministère de la Santé et du Bien-être. Ottawa, K1A 1B4.

Laminate Veneers

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SUMMARY

This status report discusses some of the clinical and material considerations in the use of laminate veneer materials and resin veneers. Clinical reports have indicated some advantages for these materials. However, long-term clinical studies have not been reported yet. The profession and the patient should consider these materials only as temporary coverage for anterior teeth.

The introduction of laminate veneer materials has provided the dental profession with another approach to the treatment of esthetic defects in anterior teeth. Until now those who were unfortunate enough to have heavily stained anterior teeth or enamel hypoplasia in any of their various forms or severely broken down teeth, had few alternatives for restoration of acceptable esthetics.

The affected teeth could be prepared for full coverage either with porcelain jacket crowns or with porcelain fused to gold alloy crowns. This involved considerable chairside time and laboratory effort to create acceptable esthetics at considerable expense for the patient. To obtain the best esthetic result a significant amount of sound tooth structure was removed with the preparation coming close to the large pulpal areas of teeth in young patients. Tooth preparation was irreversible but the crowns were anticipated to last for a long time with minimal effect on the gingival tissues.

The teeth could be built up with either autopolymerising or photo-cured composite resins using the acid etchant technique to cause mechanical retention of the material. Often crown forms were used to reduce shaping and finishing but much time was usually required to produce a satisfactory contour and achieve an almost smooth surface for the material. More recently microfill resins have been produced which with their ultrafine filler particles allow a smoother finish to the veneered restoration. However, with time the surface of all these materials darkened, picked up stain and absorbed fluid debris. These materials often chipped from incisal and lateral forces, and showed the finish line to the tooth, making the restoration unesthetic in a relatively short period of time.

For those teeth which are only heavily stained and without enamel defects, vital enamel bleach procedures have been proposed.¹ Some successful treatments have been reported particularly in those cases where the staining is light. With careful adherence to the procedure no damage to pulpal tissue occurs. However, in severely stained teeth this procedure is not effective and some coverage of the labial surface of teeth is required.

The popular press and several magazines have publicized the esthetic benefits of laminate veneers and indicated that several well known personalities have had their teeth refaced. Their emphasis has tended to be towards direct cementation of the veneer to the tooth without pain,

tooth reduction and at a greatly reduced cost to give a brighter smile to the patient.

A laminate veneer kit* was introduced to try and mask out the affected tooth surfaces. This consists of a series of sized facings for the six upper anterior teeth made from a cross-linked acrylic resin, similar in composition to the resin system for acrylic denture teeth. Some shade coloring is added in the incisal resin but the remainder of the facing is clear. The sizes vary in width and length to try and accommodate most of the shapes and sizes of natural teeth. The kit includes a dental stone on a straight mandrel to contour the facing and a solvent to clean it. A copolymer solution bonds the facing to the composite resin attaching to the labial surface of the tooth.

The composite resin system** used with the veneer may be photocured or autopolymerised and most recently incandescent light cured***. The chemistry of the resin system is very similar to that developed for composite and microfill resin restorative materials. The resin is applied to the inner surface of the facing coated in copolymer and brought into intimate contact with the labial surface of the tooth for polymerisation. The enamel has been thoroughly pre-treated with 35 per cent phosphoric acid solution to provide etched surface, and bonding agent is subsequently applied to tag into the enamel.

Selecting the Patient for the Veneer Facing

Many factors may favor the use of facings or determine their inappropriateness. They may be considered for enamel stains, enamel hypoplasia, systemic coloring of enamel, coverage of teeth with large restorations or severe breakdown and anterior diastema reduction. However the choice for their use should depend mostly on the individual to receive the treatment.

The age of the patient, their oral hygiene and motivation are important. Teeth which are fully erupted will have the margin of the veneer placed slightly subgingival, to maintain the desired esthetics. Permanent teeth of young children will require repeated replacement of the veneers as the margins expose from under the gingiva through passive eruption. All patients must maintain the gingival tissue in a healthy state to reduce any potential irritating effect from the veneer and resin.

The severity of the defects, the number of the teeth involved and the patient's¹ expectations will all determine

whether this veneer system should be used. Slight surface enamel defects may require only convincing the person that they need no treatment or coverage. The severely affected single tooth may be best treated with a crown as it is usually difficult to match the shade of the resin to adjacent teeth. Resin veneers also appear to be flatter, have less translucency and depth of color than natural enamel. Although there are shades for the composite resin and an incisal tone, a color match for a single tooth is difficult to achieve. Placing several veneers on upper anterior teeth can create a uniform color which appears fairly natural. However all treatment depends on the expectations of the patient. A uniform color match can be obtained by veneering the four anterior teeth. But the natural translucency of enamel can only be obtained with porcelain coverage. Veneers can be used only to lighten teeth and not to whiten them and there may have to be some color compromise to blend with any stained lower anterior teeth or adjacent surfaces. Financial consideration may favor the use of the veneer material for the patient as the procedure usually has no laboratory charges and can be carried out quickly. It may function as a temporary remedy until a permanent result can be afforded. The patient must be made aware of the limitations before treatment starts.

Technical Problems in Veneer Procedures

Preformed acrylic veneers may often be inadequately contoured causing either an overcontoured tooth or placement of excess stress on the materials. Contouring the veneer for each individual tooth will minimize the possibility of the veneer shattering or freeing from the enamel surface. However, there are only a limited number of sizes and shapes produced. The maximum width of 8.5 mm for a central incisor is inadequate for the largest teeth. Better contouring may be produced with veneers adapted on a cast of the dentition by applying heat and pressure to give a more ideal shape. But this procedure needs more time and laboratory technique. The placement of the veneer and resin on the tooth overcontours the tooth to the gingival margin. This may range from 0.4 mm to 1 mm and averages about 0.6 mm. It appears that although the veneer margin fits in the upper part of the gingival sulcus there is minimal increase in sulcular fluid flow or change in the gingival bleeding index.²

The finish line, whether gingival, proximal or incisal, is a critical feature of the facing. Feathering the material to the tooth surface will produce the best adaptation and the least gingival problems. It will also allow the patient to use dental floss without shredding it, particularly with teeth having tight contacts.

*Mastique, L.D. Caulk Co., Division of Dentsply International Inc., Milford, Del., U.S.A.

**Nuva-Fil, L.D. Caulk Co., Division, Dentsply International Inc., Milford, Del. U.S.A.

***Prisma, L.D. Caulk Co., Division, Dentsply International Inc., Milford, Del., U.S.A.

A dry field technique is essential for applying the resin and acrylic veneer. Saliva contamination of the etched enamel during the veneer procedure will inhibit proper attachment of the resin. One method involves using a heavy rubber dam with a 212 clamp for tissue retraction and a dry field. This will also allow for proper finishing of the gingival margin of the veneer and its placement just under the tissue. The tooth surface should be cleaned well removing all plaque, calculus and stain which can interfere with a proper etching of the enamel surface.

There is a difference of opinion as to whether the labial surface of the tooth should be reduced before applying the veneer material. By removing up to one half of the thickness of labial enamel before veneering a better contoured tooth can be produced and a definite chamfer finish line established for the material. It has also been suggested that better masking of the stains can be achieved and that retention of the resin is improved with the removal of the higher fluoride surface layer of enamel. However, tooth preparation commits the individual to future restorative procedures and coverage with a crown. Without any enamel reduction, the acrylic veneer and the resin can be removed from the tooth surface if the patient wishes. The enamel surface after polishing and fluoride treatment can be returned to its original condition.

Other Veneering Materials and Methods

Custom-made acrylic resin veneers can be prepared by a laboratory using a cast of the patient's dentition. Contour should be ideal and require no adjustment before placement but a laboratory cost is added for the procedure. The tooth will again be overcontoured with the potential for gingival irritation. A dry field technique is essential for their placement.

Celluloid crown forms with the various composite resins and recently with the microfill resins, have been used for several years to mask anterior teeth. The form usually gives an inadequate shape to the resin with an overcontoured labial surface and embrasure space. Any reshaping of the resin and careful polishing leaves a roughened surface which discolors in time. The resin if brought to the incisal edge in function may chip away from the enamel in time without the complete covering of a facing.

Custom-contoured composite or microfill resin which is light polymerised can give acceptable results against an acid etched enamel surface with attached bonding agent. Most contouring is done before polymerization allowing a minimum of overcontouring and shaped gingival margin.

However, any resin shaping develops a surface which eventually discolors and may chip under functional loading.

Forces in Function

Passive seating of veneer materials and resin will reduce stresses likely to crack or release the facing from the tooth surface. However the facing is under stress in the mouth and normal function or a sharp tap may fracture it. Cuspid veneers seem prone to fracture particularly when there is heavy function on the tooth. The veneers are brittle and can shatter also when being shaped. The bond produced by the copolymer between the facing and resin can also fail. There is very little scientific data available about the bond strength of veneers to tooth surfaces and the stresses which they can absorb without failure. Nor has there been much data published on the lateral forces exerted on anterior teeth, particularly at the incisal edges which would be the critical area for release of the veneer. However, if carefully applied, more than 80 per cent of the facings remained intact after one and two years.²

Using the chemically cured composite resin there is limited time to adapt the filled veneer to the tooth and remove excess resin before hardening occurs. U. V. light-cured resin has limitless working time and adaptation to the tooth surface but polymerisation depth depends on light exposure time and light intensity, which degenerates with the age of the bulb. The visible light-cured system reduces these problems with deep polymerisation and a lamp of constant intensity.

Veneering the labial surface of upper anterior teeth can produce some long-term temporary benefits for patients with severe esthetic defects. Success or failure can be measured in the gingival health of adjacent tissue, increased tooth thickness, decreased interproximal space, adequacy of function, and longevity of retention of the facing. The patient's expectations should be determined before treatment is started and a decision made on whether this can be achieved. However all these procedures and materials must be viewed as provisional and require periodic replacement, until long-term clinical comparisons have been made.

REFERENCES

- 1 Ingle, J.I. and Beverage, E.E.: Endodontics, 2nd Edition, Lea and Febiger, 1976, Chapter 16, pg. 738.
- 2 Gourley, J.M. and Singer, D.L.: Unpublished Data.



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Les facettes préfabriquées

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SOMMAIRE

Le présent rapport traite de certains aspects cliniques et des matériaux utilisés pour l'insertion des facettes préfabriquées et des facettes en résine, dont certains avantages ont été soulignés dans des rapports cliniques. Jusqu'ici, cependant, aucune étude clinique de longue durée n'a été signalée sur la question. Les membres de la profession de même que les patients ne devraient considérer ces matériaux que pour le revêtement temporaire des dents antérieures.

L'introduction des facettes préfabriquées offre à la profession dentaire un autre moyen de corriger les défauts esthétiques des dents antérieures. Jusqu'ici, ceux qui avaient la malchance d'avoir des dents antérieures très décolorées ou une hypoplasie de l'émail sous toutes ses formes ou encore des dents brisées avaient peu de choix pour en rétablir l'apparence de façon satisfaisante.

Les dents touchées pouvaient être préparées pour être entièrement recouvertes de coiffes en porcelaine ou de couronnes céramométalliques, ce qui demandait beaucoup de temps au dentiste, puis en laboratoire, et représentait une dépense importante pour le patient. Pour obtenir le meilleur résultat sur le plan esthétique, il fallait enlever une bonne partie de la structure dentaire et atteindre presque la pulpe qui est très large chez les enfants. La procédure était irréversible, mais on s'attendait à ce que les couronnes durent longtemps sans présenter d'inconvénients pour le tissu gingival.

On pouvait reconstruire la dent avec un "composite" autopolymérisable ou polymérisable par lumière visible, en utilisant la technique du mordantage à l'acide pour assurer la rétention mécanique du matériau. On utilisait

souvent des couronnes matrices pour faciliter le dégrossissage et la finition, mais il fallait ordinairement beaucoup de temps pour obtenir un contour satisfaisant et une surface suffisamment lisse. Depuis peu, de résines à particules ultrafines permettent une finition encore plus douce de la restauration de type facette. Avec le temps, cependant, la surface de tous ces matériaux se décolore, se tache et absorbe des débris liquides. Les matériaux eux-mêmes se fracturent souvent sous les contraintes incisives et latérales ou font voir la ligne de finition. La restauration perd ainsi sa qualité esthétique en relativement peu de temps.

Diverses méthodes de blanchiment ont été mises de l'avant pour le traitement des dents qui sont fortement décolorées mais dont l'émail est normal⁽¹⁾. Selon les rapports, certains de ces traitements réussissent surtout dans les cas de décoloration légère et on ne signale aucun dommage au tissu pulpaire si la méthode est suivie avec soin. Pour les cas de forte décoloration, la procédure est inefficace et il faut recouvrir dans une certaine mesure la surface labiale des dents.

La grande presse et plusieurs magazines ont fait état des avantages esthétiques des facettes préfabriquées et rapporté que plusieurs personnalités avaient ainsi refaire leurs dents. Ils ont surtout souligné que la facette était cimentée directement à la dent, sans douleur, sans réduction de la dent et à un prix bien inférieur, susceptible de donner au patient un sourire encore plus éclatant.

Une nécessaire de facettes préfabriquées(*) a été mis sur le marché pour camoufler la surface des dents affectées. Il comprend un jeu de facettes de diverses grandeurs pour les six dents antérieures supérieures, faites de résine acrylique

*Mastique, L.D. Caulk Co., Division of Dentsply International Inc., Milford, Del., U.S.A.

réticulée dont la composition ressemble à celle des dents de prothèse en acrylique. Le bord incisif en est légèrement teinté alors que le reste de la facette est transparent. Elles varient en largeur et en hauteur pour s'adapter le plus possible à la forme et à la dimension des dents naturelles. Le nécessaire comprend aussi des pierres montées sur mandrins pour ajuster le contour de la facette, ainsi qu'un solvant de nettoyage. Un liquide copolymère fait adhérer la facette au composite et sert de liaison à la surface labiale de la dent.

Le composite(**) utilisé pour les facettes préfabriquées peut se polymériser de lui-même ou par lumière visible ou encore, depuis peu, par lumière incandescente(***). La composition chimique de la résine ressemble beaucoup à celle des composites conventionnels ou à microparticules. La résine est appliquée à la surface intérieure de la facette recouverte de copolymère, puis posée sur la surface labiale de la dent pour la polymérisation. Auparavant, l'émail été bien préparé avec une solution d'acide phosphorique à 35 pour cent pour en assurer le mordantage et un agent liant a été appliqué pour assurer la pénétration dans l'émail.

Le choix du patient

L'utilisation des facettes préfabriquées dépend de plusieurs facteurs: d'une part, il y a la nature des taches et de l'hypoplasie, la décoloration d'origine systémique, l'importance de la restauration ou du bris de la dent, ainsi que la réduction d'un diastème; d'autre part, le choix dépend surtout de la personne qui recevra le traitement.

L'âge du patient, son hygiène buccal et sa motivation sont importants. Pour le cas des dents en éruption complète, le bord de la facette est placé légèrement sous la gencive afin d'obtenir l'effet esthétique désiré. Chez les enfants en pleine croissance, faut-il replacer plusieurs fois la facette dont le bord sortira de la gencive pendant l'éruption continue des dents permanentes. Tous les patients doivent garder leur tissu gingival en bonne santé pour prévenir l'irritation causée par la facette ou le composite.

L'importance des défauts, le nombre des dents affectées et les attentes du patient⁽¹⁾ sont aussi d'autres facteurs à considérer. Pour de légers défauts de surface, il suffit de convaincre la personne en question qu'elle n'a pas besoin de traitement ni de revêtement. Il est peut-être préférable de poser une couronne si une seule dent est sérieusement

affectée, car il est ordinairement difficile de donner au composite la même teinte que celle des dents adjacentes. Les facettes préfabriquées paraissent aussi plus aplaties, elles sont moins translucides et leur couleur a moins de profondeur que l'émail naturel. Quoique le nécessaire contienne un choix de couleurs pour les composites et de teintes pour le bord incisif, il est difficile d'ajuster la couleur d'une seule dent. Par contre, on peut arriver à donner aux facettes préfabriquées une apparence assez naturelle, si on en pose à plusieurs dents antérieures supérieures. Le choix du traitement dépend cependant de ce qu'en attend le patient. On peut uniformiser la couleur des facettes des quatre dents antérieures, mais on n'obtiendra la translucidité naturelle de l'émail qu'avec des couronnes en porcelaine, les facettes préfabriquées ne servent qu'à éclaircir les dents, pas à les blanchir, et il faudra peut-être faire certains compromis pour qu'elles s'harmonisent avec la couleur des dents inférieures ou des surfaces adjacentes. Il peut être avantageux pécuniairement pour le patient de se faire poser des facettes préfabriquées, car la procédure n'entraîne pas ordinairement de frais de laboratoire et peut se faire rapidement. C'est une mesure temporaire et le patient doit en connaître les limites avant de commencer le traitement.

Les problèmes techniques

Souvent les facettes préfabriquées en acrylique n'ont pas le contour adéquat: ou il est exagéré, ou il engendre une contrainte excessive sur le matériau. En ajustant bien le contour de chaque dent, on risque moins de voir la facette se briser ou perdre sa rétention. La largeur maximale des incisives centrales, qui est de 8,5 mm, ne suffit pas pour les dents les plus grandes. On peut alors obtenir un meilleur contour, si on ajuste les facettes sur un modèle de pierre artificielle en y appliquant de la chaleur et de la pression. Cette procédure demandera cependant plus de temps et plus de travail en laboratoire. En insérant la facette et le composite sur la dent, le contour déborde la dent jusqu'au niveau de la bordure gingivale, de 0,4 à 1 mm et, en moyenne, d'environ 0,6 mm. Si le bord de la facette s'ajuste à la partie supérieure des crevasses gingivales, il semble que le liquide qui en suinte n'augmente que très peu ou que l'index de saignement en soit très peu modifié⁽²⁾.

Qu'elle soit gingivale, proximale ou incisive, la finition est une phase délicate de la procédure. En finissant à rien la facette à la surface de la dent, on obtiendra un meilleur ajustement et on s'exposera à très peu de problèmes gingivaux. Cela permettra aussi au patient d'utiliser la soie dentaire sans l'effilocheur, notamment si les dents ont des points de contact serrés.

**Nuva-Fil, L.D. Caulk Co., Division of Dentsply International Inc., Milford, DEL., U.S.A.

***Prisma, L.D. Caulk Co., Division of Dentsply International Inc., Milford, Del. U.S.A.

Il faut absolument appliquer la facette et le composite dans un champ sec. La contamination de la surface mordancée par la salive au cours de la procédure empêchera la bonne rétention du composite. On peut, entre autres méthodes, utiliser une digue épaisse et un crampon n° 212 pour permettre la rétraction des tissus et obtenir un champ sec. Ceci permettra de bien finir la facette à la bordure gingivale et de la placer juste dessous le tissu. La surface de la dent doit être bien nettoyée en enlevant toute plaque, tout tartre et toute tache qui pourraient entraver le mordançage de l'émail.

Les opinions varient en ce qui a trait à la réduction de la surface labiale de la dent avant d'appliquer la facette préfabriquée. En réduisant jusqu'à la moitié l'épaisseur de l'émail labial, on peut obtenir un meilleur contour et une ligne de finition de type chanfrein bien définie. Certains sont également d'avis qu'on peut obtenir un meilleur camouflage des taches et améliorer la rétention du composite en enlevant la couche superficielle, riche en fluor, de l'émail. La préparation de la dent engage cependant le patient à d'autres procédures restauratrices et à l'insertion d'une couronne. En ne réduisant pas l'émail, la facette préfabriquée et la résine peuvent être enlevées, si le patient le désire, et l'émail remis dans son état original par un polissage et un traitement de fluor.

Autres types de facettes

Il est possible d'individualiser les facettes en laboratoire, sur des modèles de pierre artificielle. Le contour devrait être idéal et ne demander aucun autre ajustement avant la mise en bouche. Cela entraînerait cependant des frais de laboratoire, et il faut toujours prévoir un certain débordement et la possibilité d'une irritation gingivale, sans oublier que la mise en bouche doit se faire dans un champ sec.

Les couronnes matrices préfabriquées en celluloïde et divers composites servent depuis plusieurs années à camoufler les dents antérieures. Le composite à micro-particules est d'usage plus récent. La matrice ne donne pas cependant la forme adéquate à la résine et laisse un contour exagéré à la surface labiale et à l'embrasure. Malgré un polissage soigné, toute retouche à la résine laisse une surface rugueuse qui se décolore à la longue. Si le bord incisif est fonctionnel, la résine peut éventuellement se briser, laissant la dent partiellement à découvert.

Le composite ajusté sur mesure ou la résine à microparticules qui est polymérisée à la lumière peuvent donner des résultats satisfaisants, s'ils sont appliqués avec un agent liant à une surface mordancée. L'ajustement du contour se fait, en grande partie, avant la polymérisation, laissant

très peu de surplus et une bordure gingivale bien formée. Toutefois, tout façonnement du composite donne une surface qui finit par se décolorer et qui peut se briser sous les pressions fonctionnelles.

Les forces en jeu

L'insertion non forcée des facettes préfabriquées et du composite réduira les contraintes qui peuvent causer des craquelures ou le dégageement du revêtement. Néanmoins, celui-ci est soumis à des pressions et il peut se fracturer dans ses fonctions normales comme au moindre coup. Les facettes des canines sont portées à se fracturer surtout lorsque la dent travaille beaucoup. Les facettes sont fragiles et peuvent éclater aussi au cours du façonnement. La liaison produite par le copolymère peut aussi faire défaut entre la facette et le composite. On possède encore très peu de données scientifiques sur la force de liaison des facettes à la surface des dents ni sur le degré de pression qu'elles peuvent absorber sans se briser, pas plus qu'on a publié d'information sur les forces latérales qui s'exercent sur les dents antérieures, surtout sur le bord incisif où la facette risque le plus de se détacher. Toutefois, lorsqu'elles sont bien insérées, plus de 80 pour cent des facettes restent intactes au bout d'un an ou deux⁽²⁾.

Le composite autopolymérisant laisse peu de temps pour ajuster la facette à la dent et enlever l'excès de résine avant de durcir. Le composite polymérisable aux rayons U.V. donne tout le temps voulu pour travailler et ajuster la facette à la dent, mais la profondeur de la polymérisation dépend alors de la durée d'exposition à la lumière et de l'intensité de celle-ci, qui diminue au fur et à mesure que l'ampoule vieillit. La polymérisation à la lumière visible nous assure une réaction plus complète.

La mise en bouche de facettes à la surface labiale des dents antérieures supérieures peut offrir des avantages qui durent, mais ont un caractère provisoire, chez les patients qui ont de sérieux problèmes esthétiques. On peut en évaluer la réussite, ou l'insuccès, par l'état du tissu gingival adjacent, par l'épaisseur accrue de la dent, par la réduction de l'embrasure, par le bon fonctionnement de la dent et par la durée de rétention de la facette. Il faut bien établir avant le traitement les attentes du patient et savoir si on peut y répondre. En attendant d'avoir des études cliniques de longue durée, il faut considérer que toutes ces procédures et tous ces matériaux donnent des résultats provisoires dont il faut prévoir le remplacement périodique.

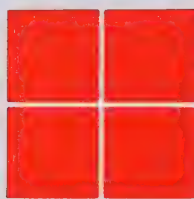
Renvois

- (1) Ingle, J.I. and Beverage, E.E.: *Endodontics*, 2nd Edition, Lea and Febiger, 1976, Chapter 16, pg. 738.
- (2) Gourley, J.M. and Singer, D.L., Unpublished Data.

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The Denturist Movement in Canada

Part I: Growth and Development in the Western Provinces

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In Canada 25 years ago, only dentists and physicians could legally provide and fit a dental prosthesis. Dentistry was clearly defined by legislation in every province and territory and the courts were expected to penalize anyone who provided a dental service to the public without appropriate qualifications. Today, in all but two provinces and one territory, a denture service is provided by a legally recognized and licensed group who are not dentists. They, as a nationally organized association, call themselves denturists, although in some provinces they are legally referred to as dental mechanics, denture therapists or denturologists.

Organized dentistry in Canada is not happy with the establishment of this alternative denture service and in each province dentists have vigorously (although unsuccessfully) opposed its birth and maturation. This series of three articles will describe this new profession, or trade, from its origins to its current status.

EARLY HISTORY

The legal status of dentistry in Saskatchewan was established by an Act of Parliament in 1906.¹ After this date, an examination was offered to anyone who had a dental licence from Great Britain and Ireland, the United States or any other Canadian province. This Act was amended in 1916 to permit those who were eligible for registration but had not passed the necessary examination to "practise dentistry and dental surgery as assistant to a duly licensed practitioner".² A public outcry occurred following the death of a patient who had been treated by an assistant.³ (The assistant was alleged to have worked independently of a registered dentist.) The short-lived legislation was amended in 1917⁴ to require registration of assistants, to prevent them from working in a dental office in the absence of the dentist and to ensure that they took the prescribed examination within six months.

In 1923, an Alberta dental technician was prosecuted for making dentures directly for a patient. Two years later,

when he was convicted for his third offence, he appealed the decision to the Privy Council.⁵ Although the appeal was withdrawn, the Minister of Health told the Alberta Dental Association Board in 1926 that if it did not control the cost of dentures, he would promote the right of dental technicians to work directly for the public. Subsequently, in 1933 the Public Health Act⁶ was amended to permit a dentist to associate with a "dental mechanic" in making complete dentures directly for the public. Although this legal association did not flourish, several technicians got a start and began their practical experience independently of the dental profession. The first real "crack in the armour" of organized dentistry had been achieved.

THE GATHERING STORM

After World War II many dental technicians who had been trained in the armed forces attempted to ply their trade in civilian life. Commercial dental laboratories were new to the Canadian dental scene; however, employment opportunities were scarce. Practising dentists, who had little experience working with auxiliaries, were wary and laboratory owners had to work hard to develop their businesses and to gain the dentists' confidence. The sudden influx of trained technicians allowed many laboratory owners to keep their costs low. In many laboratories wages and working conditions were poor and job security was non-existent.

British Columbia

In the late 1940s, the Dental Technicians' Society was formed in British Columbia by a small group of technicians who saw a future in defying the Dentistry Act and offering a denture service directly to the public. Another group of technicians who were unwilling to work illegally attempted to form a dental technicians' division of the International Chemical Workers' Union; however, they were opposed by the laboratory owners and the dental profession. Animosity was such that when the negotiations between the employer and employees broke down,

two senior technicians who had acted as union officials were dismissed.

This confrontation resulted in the incorporation of the Dental Technicians' Society of British Columbia. Bills were introduced in the British Columbia Legislature to allow technicians to repair dentures directly for the public and to associate with a dentist in making dentures. This proposed legislation was opposed by the College of Dental Surgeons of British Columbia and the Dental Laboratories Association (the organized group of commercial dental laboratory owners). Committees were struck by the Minister of Health and Welfare in 1955 and 1957 to investigate the issues. Another bill, in 1958, provided for the examination and registration of dental technicians to "make, produce, reproduce, construct, furnish, supply, alter, or repair any prosthetic dentures and for such purposes, deal directly with the person for whom the denture is intended".⁷ With the removal of the clause, "and for such purposes, deal directly with the person for whom the denture is intended", the Dental Technicians Act⁸ was passed in 1958. Shortly after, the Dental Technicians' Society, representing the aspiring "denturists", changed its name to the Public Denturists Society of B.C.

Regulations accompanying this Act permitted "senior grade" technicians, with at least 12 years experience (of which at least seven had been spent in "an establishment dealing with the public in British Columbia"), to make complete dentures directly for the public on prescription from a dentist.⁹ After September 1960, no more "senior-grade" technicians were to obtain this privileged licence so that the "problem" would be defused by retirement and death.¹⁰ A challenge in the Supreme Court of British Columbia in 1961 which resulted in the 1962 Act to amend the Dental Technicians Act,¹¹ invalidated the privileged status attributed to the few "senior" technicians. In their place a new dental category was created — the dental mechanic. The following year, 84 dental technicians (out of approximately 95 candidates) were successful in the three examinations prescribed by the newly constituted Dental Technicians' Board and were duly licensed as dental mechanics. Because the Act prevented an individual operating as both a dental mechanic and technician, more enterprising technicians who had not yet established laboratories, and therefore had less to lose, became dental mechanics.¹² Initially a dentist served on the five-member Board but resigned after a short period and was replaced by a lay-person.

THE PUSH EASTWARD

Alberta:

Although the 1933 Public Health Act in Alberta allowed dentists and dental mechanics to associate, five technicians promising to make dentures for old age pensioners and welfare recipients, initiated a move to create their own Act in 1958. In 1960 the Dental Auxiliaries Act¹³ was introduced. This Act specified that auxiliaries' "serv-

ices shall only be rendered under the supervision of direction of a dentist". The technicians, discontent with this restriction, petitioned the legislature the following year with a bill to incorporate the Alberta Public Denturists Society. This bill was passed in an amended form as The Certified Dental Mechanics Act.¹⁴

Saskatchewan

A definition of dentistry or dental surgery in an Act passed by the Saskatchewan Legislature in 1959 did not include the replacement of human teeth.¹⁵ This legislation also ruled that a person making dentures, but not holding a licence to practise dentistry, must obtain a "Certificate of Oral Health" signed by a dentist or a physician. Members of the Denturist Society of Saskatchewan, who had been lobbying for legality since the late 1950's, saw this law as an endorsement of their existence and enthusiastically expanded their activities. A year later, public pressures produced an amendment that deleted acknowledgement of unlicensed persons making tooth replacements and placed all prosthodontic procedures within the definition of dentistry.¹⁶ However, denturists who had set up expensive private clinics were unwilling to retreat and continued to operate illegally.

Manitoba

In 1960, the threat from the growing practice of denturists in the West caused the Manitoba Dental Association to sponsor changes in the Dental Association Act.¹⁷ These changes resulted in the education of dental hygienists in dentally supervised prosthetic duties (such as edentulous arch impressions) and the establishment of low cost denture clinics operated by dentists. Growing public sympathy for the illegal technicians and skillful publicity by the Denturist Association of Manitoba negated the effects of these changes. In 1964, a special legislative committee surveyed the activities of illegal mechanics, and, in 1966, published a report recommending that dental auxiliary activities expand, that dental mechanics work in edentulous mouths under direct dental supervision and that this mechanic should be "adequately educated". Four years of debate followed.

CONSOLIDATION IN BRITISH COLUMBIA AND ALBERTA

The 1962 amendment to the Dental Technicians Act of British Columbia describes dental mechanics as persons permitted to make complete dentures for anyone who has obtained a Certificate of Oral Health signed by a dentist or a duly qualified medical practitioner. This certificate attesting to the health of the oral cavity, has posed a problem to both mechanics and dentists. Mechanics feel it is an unnecessary constriction on their ability to serve the public and a financial burden to the patient. They claim that dentists refuse to cooperate and frequently refuse to sign the certificate.

Dentists, unsure of their legal responsibilities for disease control after the denture is inserted, viewed the document with suspicion. In 1969, the College of Dental Surgeons of B.C. made public the names of dentists who were prepared to examine patients wishing to go to a dental mechanic. After taking legal counsel in 1979, the Registrar of the College advised dentists to sign this certificate where appropriate.

When the Certified Dental Mechanics Act came into force in Alberta, 79 technicians gained a mechanic's licence without examination. Five technicians who instigated the movement were named in the Act as the provisional council of the Alberta Certified Dental Mechanics Society. A Board of Examiners, consisting of a dentist, a physician, a civil servant and two dental mechanics, was called to assess the quality of future members of the Society. The Minister of Health would not administer the Act because he did not feel that the mechanics belonged to the "health professions". The Act was placed under the direction of the Minister of Labour. It has since been transferred to the Department of Social Services and Community Health and the dental and medical representatives have been replaced on the Board by dental mechanics, a layperson and a secretary. The Northern Alberta Institute of Technology has established a two-year, full-time course designed to educate dental mechanics in intra-oral procedures and related subjects.

Arguments, used fruitlessly in British Columbia against the "Certificate of Oral Health", were used successfully in Alberta in 1965 to abolish a similar document.¹⁹ With the approval of the Minister in charge of the Act and without any assurance of dental or medical diagnostic advice, dental mechanics now make immediate dentures. Initially most dentists were reluctant to extract teeth and insert these dentures, but the dental resistance has softened and a dental mechanic's referral for surgery is no longer unusual.

In 1964, following the example of the Manitoba Dental Association, the College of Dental Surgeons of British Columbia decided to organize denture clinics staffed by dentists who would "construct full dentures as economically as they could (1) to stop any further encroachment on the Dentistry Act by the mechanics and (2) more importantly, to ensure that the public could receive professional denture care at a nominal fee".²⁰ The clinics are financially successful and, in part, still serve the purpose for which they were intended. At the annual meeting of the Public Denturists Society of British Columbia in 1966, the members considered a proposal that they would provide a "lifetime false teeth service" for \$200.²¹ This proposal was rejected; however, the Denturists Society was gaining ground publicly. In the same year, a special legislative committee studying the Dental Technicians' Act, recommended that dental mechanics be permitted to make removable partial and immediate dentures.²²

THE SECOND WAVE

Manitoba

The Manitoba Dental Mechanics Act was passed in 1970.²³ A committee, representing the Denturist Association, the Manitoba Dental Association and the Health Department, was appointed by the Minister of Health and Community Services and charged with writing the regulations to this Act. Prior to taking office, the two representatives of the Denturist Association of Manitoba were subjected to an examination conducted by the two dentists on the committee. The committee deliberated until 1972 before making regulations available. Provisional licences were issued to all technicians who had been operating (illegally) for at least five years. Before a permanent licence could be obtained, theoretical and practical examinations in complete denture construction and sanitary practises were offered.

According to the Act, a "Certificate of Oral Health" signed by a dentist or a medical practitioner, must be produced by a patient before a dental mechanic can make a complete denture. confusion concerning the right of dental mechanics to make removable partial dentures focussed on the interpretation of Section 6 (3) of the Act. This section requires that a "prescription" be signed by a dentist or medical practitioner before a dental mechanic can "make . . . any prosthetic denture or dental plate for any person who has live teeth in his mouth". Sections 6 (4) and 8 state a prescription is not necessary in the absence of live teeth in the dental arch for which the denture is intended. Consequently, dental mechanics assume that Section 6 (3) refers to a denture made by them around live teeth (i.e. a removable partial denture). The Manitoba College of Physicians and Surgeons assisted dentists by prohibiting members from signing a prescription for dentures. The Act has since been amended to remove the involvement of medical practitioners. In 1976 a solicitor from the Department of Health gave an opinion that a dental mechanic could provide any prosthetic denture for a person who has live teeth in his mouth providing a "Certificate of Oral Health" or a prescription was provided by a dentist.²⁴ The Dental Association in turn passed a regulation stating no member may prescribe to a "non-dentist who is not employed in the member's office and under his supervision and control" the fitting or provision of a partial denture or an immediate denture.²⁵

Saskatchewan

To conclude this success story in the Western Provinces, a final assault was needed in Saskatchewan. The illegal technicians in this province were busy and apparently thriving in the early Seventies. In 1976, with the resurrection of activity in the Eastern Provinces, the Denturist Society of Saskatchewan requested permission to make removable partial dentures and complete dentures. Immediately briefs were produced by the College of Dental

Surgeons of Saskatchewan and local dental educators attempting to show the difficulties of removable partial denture therapy and the risks to the public from inadequate disease recognition and control. Joint meetings were held between the College of Dental Surgeons, denturists and government. Denturists wanted the privilege of referring a patient to a dentist for preparation of the mouth before making removable partial dentures. The Denturist Act,²⁶ debated in 1976 and passed in 1977, permitted the licensing of denturists and partial denture technicians.

Partial denture technicians before providing treatment must receive from a patient a standard referral form signed by a dentist. The Regulations²⁷ state denturists "shall not diagnose conditions relating to the health of the oral cavity" and are not permitted to make immediate dentures or perform a procedure that alters any oral tissue. There are no regulations relating to the supervision of, or prescription for, complete dentures.

Those eligible for registration under the Act had to be members of the Denturist Society of Saskatchewan, to have practised as a denturist in Saskatchewan prior to September 1977 and to have passed the initial examination. The examining board was composed of three out-of-province denturists provided by the Denturist Association of Canada and a dentist from the Saskatchewan Department of Continuing Education. The examination on the theory and practice of complete dentures was held in March 1978. Those members wishing to meet the qualifications established for registration as a partial denture technician required registration as a denturist and experience in dispensing partial dentures for at least one year prior to the Act's enforcement. A theoretical and practical test was offered on surveying and designing cast partial dentures and planning a treatment course on supplied casts.²⁸

CONCLUSION

The few dental technicians who refused to work only for dentist in the early 1950's probably were unaware of the potential magnitude of their rebellion or of the profound influence they would have on the provision of dentistry in Canada. From the "bootleg" operations in B.C. and Alberta to an educational base in the Northern Alberta Institute of Technology, a picture of rapid growth, organization and popularity is visible. The dentists in Western Canada still had hopes that the "problem" would go away but the developments occurring in the East were to prove that, at least for the next decade, the denturists were

still moving. Part II of this article will follow this movement from Ontario to the Maritimes.

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REFERENCES

- 1 An Act Respecting The Dental Profession of Saskatchewan, Ch. 29, 1906. Queen's Printer, Saskatchewan.
- 2 An Amendment to Section 24 of The Dental Profession Act, Ch. 37, s. 19(2), 1916.
- 3 Gullett, D.W. A History of Dentistry in Canada, University of Toronto Press, 1971, p. 155.
- 4 An Act to Amend the Dental Profession Act. Ch. 20, c.13, 1917. Queen's Printer, Saskatchewan.
- 5 Martinello, B.P. Executive Director, Alberta Dental Assn. Personal communication, 1977.
- 6 An Act to Further Amend the Public Health Act, Ch. 32, s.24a, 1933, Queen's Printer, Edmonton.
- 7 Bill No. 45, 1958, Section 6: An Act Respecting Dental Technicians. Queen's Printer, Victoria, B.C.
- 8 Dental Technicians Act of B.C. 1958, c.13, s.1, Queen's Printer, B.C.
- 9 Dental Technicians Act of 1958. Regulation 128, June 1960, Vancouver, B.C.
- 10 College of Dental Surgery of B.C. Submission to the Royal Commission on Health Services, Vancouver, 1962.
- 11 An Act to Amend the Dental Technicians Act. Ch. 21, 1962. Queen's Printer, B.C.
- 12 Brief to the Provincial Government of B.C. Regarding Problems Facing Dental Technicians — Supplied by the Dental Laboratories Assn. of B.C. 1973.
- 13 An Act Respecting Dental Auxiliaries. Ch. 23. 1960. Queen's Printer, Edmonton.
- 14 The Certified Dental Mechanics Act. Ch. 93. 1961. Queen's Printer, Edmonton.
- 15 An Act Respecting the Dental Profession of Saskatchewan. Ch. 108, s.5, 1959. Queen's Printer, Saskatchewan.
- 16 An Act to Amend the Dental Profession Act, 1959. Ch. 70, 1960. Queen's Printer, Saskatchewan.
- 17 An Act to Amend the Dental Association Act. Ch. 9, 1960. Queen's Printer, Manitoba.
- 18 Final Report of Special Committee on Provision of Dental Services by Dental Technicians and Denturists. Manitoba Legislative Assembly, Winnipeg, 1966.
- 19 An Act to amend the Certified Dental Mechanics Act. Ch. 8, 1965. Queen's Printer, Edmonton.
- 20 History — Academy of Dentistry of B.C., College of Dental Surgeons of B.C. Information Circular, May 1970.
- 21 Victoria Times, September 15th, 1966. p. 16.
- 22 Shrum Report. The special committee of the legislature to study matters relating to the provisions of the Dental Technicians' Act. March 7, 1966. Victoria, B.C.
- 23 The Dental Mechanics Act. Ch. 103, 1970. Queen's Printer, Manitoba.
- 24 Correspondence to the President of the Manitoba Dental Association from the Executive Director, Dental Care Programs. Dept. of Health, December 8, 1976.
- 25 Manitoba Dental Association Act, Section 9, Sub-section (1) (i), By-law 15-78, February 1978.
- 26 The Denturists Act of Saskatchewan, Ch. 18, 1976-77.
- 27 Regulations pursuant to Section 7(2) of the Denturist Act, 1977.
- 28 The Transitional Governing Council of the Denturists Society of Saskatchewan. Further information regarding Examinations to all Saskatchewan Denturists, circulated January 17, 1978.

The Denturist Movement

Part II: Acceptance in Eastern Canada

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In this series of three articles, Part I has described the evolution in Western Canada of a group of people who successfully challenged the dental profession and gained the legal right to provide a denture service directly to the public. By 1971, British Columbia, Alberta and Manitoba enacted legislation that allowed dental mechanics to treat patients, and the dental mechanics were sufficiently well organized to form a National Association of Denturists to promote their cause across the country. This article describes the organization and growth of this movement in Eastern Canada.

Ontario — The Major Threat

The successful evolution of dental mechanics in British Columbia and Alberta gave considerable impetus to the Ontario dental technicians who wished to defy the law and work directly for the public. Despite some harsh publicity, emotional court appearances and recurrent fines, the denturists' movement gained momentum in 1971. After the Denturist Society of Ontario presented a brief to the Minister of Health, suggesting that its members could provide a complete and removable partial denture service directly to the public, public sympathy was aroused by a sophisticated advertising campaign.

The following year, a task force composed of seven lay people and three dentists was convened by the minister to "develop recommendations regarding the role and scope of practice of dental technicians."¹ After much deliberation, a proposition was advanced to educate a "dental technologist" who would make complete and removable partial dentures under the supervision of a dentist. Attention was paid to the need for dental supervision of these auxiliaries to reduce the potential health risks to the public, and the responsibility for their education was given to the George Brown College of Applied Arts and Technology, in Toronto. Other recommendations from this convention included developing portability and national standards for all dental auxiliaries and educating dental students and dental auxiliaries side by side. In addition, the dental profession was urged to operate a network of low cost denture clinics throughout Ontario.

Bill 203, the Dental Technologist Act,² was introduced to the Ontario Legislature to establish a denture service provided by independent unsupervised dental technicians. The bill was withdrawn after the Ontario Dental Association offered to establish a low cost denture service in Toronto and nine other cities. Bill 246 was drafted to create a denture therapist who would work only under a

dentist's supervision,³ and accompanying legislation was introduced to encourage and regulate the provision of low cost dentures (\$180) by dentists.⁴ Both bills were passed and became law in December 1972.

The Governing Board of Denture Therapists, set up to control the educational and licensing standards of this new dental auxiliary, struck a committee of dentists to examine denture therapist applicants. The first examination, held in 1973, produced 138 therapists who obtained their licences with the understanding that they could work only with a dentist's direct supervision.⁵

The Denturists Society, with a membership of more than 190 dental technicians, opposed Bill 246 and refused to be examined by this committee of dentists. The Society communicated with the minister, requesting "refresher courses" be made available to those who felt they were "unfairly" examined,⁶ and emphasized its intended opposition to any future requirements that denture therapists be supervised by dentists. The minister refused to comply with these requests and the Denturists Society remained firm in its resolve to cling to its independence.

The same year, the chairman of the Governing Board of Dental Technicians stated in an open letter to the dental profession that a more equitable division of the "prosthetic dollar" was necessary if the dental laboratory industry was to stay healthy.⁷ This was a reminder of the concerns expressed in 1973 by a similar body in British Columbia. Under pressure from the Denturists Society and being aware that the Ontario Dental Association had failed to establish many denture clinics, the Minister of Health warned that existing legislation might be changed if a low cost denture service was not forthcoming from dentists.

Early in 1974, the 175 members of the Denturists Society agreed to take the examination and all but 20 were successful. Bill 70 was introduced and passed in June of that year, permitting denture therapists to make complete dentures without a dentist's supervision, and removable partial dentures under supervision.⁸ The examination committee resigned in protest because they felt that the terms of reference under which they had previously passed candidates had been violated.

Nova Scotia — The Quiet Campaign

When the publicity campaign of Ontario's denturists was at its peak in 1971, the Denturist Society of Nova Scotia revealed that its members, operating illegally, were receiving approval and requests for their services

from the Department of Public Welfare, the Workmans' Compensation Board, the Welfare Department of the City of Halifax and the Municipality of The County of Halifax.⁹ A bill, presented to Parliament in 1972 to legalize these activities, was defeated by a narrow majority. The following year, the legislature approved another bill which resulted in the Denturists Act.¹⁰ Governed by a Licensing Board, a denturist could now make complete dentures without supervision.

The Board originally consisted of seven members — four dental surgeons, a dental technician, a denturist (when one had been licensed) and three lay members. The chairman was appointed from the lay members. In January 1975 the regulations were published¹¹ and an interim licence was issued for one year to all persons who had carried on the practice of denture technology in Nova Scotia prior to October 1973. An examination was offered that required the candidates to make a complete upper and lower denture for a patient and tested their knowledge on the use of instrument sterilization techniques. There were 32 candidates who sat this examination and 29 were successful.¹²

Quebec — A Prosthodontic Dilemma

A Quebec parliamentary commission, charged with studying a Bill introduced to legalize denturists, received a brief from dentists in 1972. The brief begins: "The Province of Quebec has the unhappy distinction of being the area with the world's highest incidence of badly made removable prostheses."¹³ By 1973 the illegal provision of complete and removable partial dentures by dental technicians in Quebec was widespread. Between 1970 and 1973, several briefs were presented to the government by concerned dentists, referring to the poor dental health of the people in Quebec, the frequent occurrence of edentulism in the youth and the dangers of poorly educated technicians treating the public. They were all to no avail.

In an attempt to oversee the activities of the many "professional groups" operating for the public, the Government of Quebec introduced the Professional Code in 1973.¹⁴ The governing body of this code, the "Office des Professions du Quebec," functions to see that each corporation ensures the protection of the public. Each corporation must adopt a code of ethics, establish a conciliation and arbitration procedure and have a professional inspection committee. The code also provides for an "Interprofessional Council" which "may invite professional groups . . . whose members are engaged in related activities to meet to find a solution to their problems." The Denturologists Act,¹⁵ assented to in July 1973, and the Dental Act, were placed in concordance with the Professional Code. This legal environment, apparently ideal to provide cooperation between both dentists and denturologists, has not helped ease the antagonism between the two professions.

The practice of denturology is defined in the Denturo-

logists Act as "Every act having as its object the taking of impressions and occlusions, the trying, fitting, adjusting, replacement (sic) or sale (sic) of removable dental prostheses to replace the natural dentition."¹⁶ A denturologist must work on prescription from a dentist or obtain from each patient a "dental health certificate issued by a dentist during the preceding year."¹⁷ Another paragraph forbids a denturologist from the "diagnosis or treatment of any deficiency of the teeth, mouth or maxillae in human beings."¹⁸ A section in the Dental Act states that a dentist may not "have a direct or indirect interest in an undertaking for the manufacture or sale of any dental prosthesis."¹⁹ These sections from the two Acts when placed together prevent dentists from making prostheses and denturologists from diagnosing the need for them. To relieve the "Catch 22", a further section in the Dental Act allows a dentist to "take impressions and occlusion and to test, set, adjust, replace and sell removable or fixed devices."²⁰

These two Acts lack clarity. The Government or its "Office des Professions de Quebec" has not chosen to be more explicit or restrictive. Furthermore, few attempts have been made to enforce the use of the prescription and the dental health certificate.

An examination, open to members of the Association of Dental Technicians of the Province of Quebec, was held in July and August 1974 at the University of Montreal. This theoretical and clinical examination attracted 454 applicants, of which 481 candidates were examined and 416 were successful and subsequently licensed.² The examination committee had three representatives of the Association of Dental Technicians, one representative of the Order of Dentists of Quebec, one representative of the Department of Social Affairs and a chairman appointed by the Quebec Professions Board. The chairman had the deciding vote and dental representatives felt their opinions on content, conduct and outcome of the examination were ineffective.

As in other provinces, denture clinics were operated by dentists to provide a low cost denture service in competition with the denturologists. This service did not, however, end the popularity of the denturologists and the clinics have closed.

The Maritimes and the Territories

— The Last Dental Stand

New Brunswick

When a brief was presented to the New Brunswick Legislature outlining examination and educational requirements for a proposed profession of denturists, the New Brunswick Dental Society provided no opposition other than a comment on the need for sound educational standards. The Act,²² allowing denturists to make complete dentures without supervision, was passed in June 1976. The Minister of Health set up an Interim Denturist Examining Committee to draw up regulations and a qualifying examination. An interim licence was issued to

all members of the Denturists Society with five or more years of experience in "the field of denture technology" who were registered dental technicians.

Acting in compliance with the Act, this Interim Committee ruled that a theoretical and a practical examination must be passed by at least 10 denturists before a Denturist Examining Committee could be formed. The denturists stated that the Interim Committee consisted of too many dentists and refused to cooperate. The two-year limit on setting up the legal body of denturists was extended until agreement between the Minister of Health and the Denturists Association resulted in an examination that occurred between November 1978 and January, 1979. Seventeen candidates were successful in the examination, which was set by the Association of Denturists of Canada after the style of the Saskatchewan examination held in March 1978.²³ Seminars were held at the George Brown College of Applied Arts and Technology, in Toronto for those successful candidates, and they were required to submit, to an evaluation committee of one dentist and one denturist, two patients for whom they had made complete dentures. Sixteen denturists completed all the requirements and were licensed in January 1980.

The Denturist Examining Committee has since been formed and conducts the examinations for licensing future denturists in the province.

Newfoundland and Labrador

In Newfoundland, dental technicians providing a direct prosthetic service to the public are without legal status, although attempts are currently under way to have "denturist" legislation passed.

In 1973, the Newfoundland Dental Association (N.D.A.) instituted a program to provide a low cost denture facility. A clinic was opened in St. John's and it was planned by the N.D.A. that "dental technologists" would work with dentists in this and other clinics. This cooperative objective has not been achieved.

In an attempt to speed the introduction of denturist legislation, the Newfoundland and Labrador Denturists Association invited the Denturist Association of Canada to set a theoretical and practical examination in May 1979. Eleven members took the examination and seven were successful.²⁴ The results were offered to the Government as evidence that there was a group of competent denturists who were prepared to offer a total removable prosthodontic service similar to that available in Saskatchewan. The Government has not acted on this evidence.

Northwest Territories

In June 1972, the Commissioner of the Northwest Territories enacted a Dental Mechanics Ordinance. Any person "who holds a valid and subsisting licence issued to him by a province to engage in the business of denture construction" and "is of good character," may obtain a licence to work as a denturist.²⁵ This ordinance permits a dental mechanic to make complete dentures only and the Com-

missioner is responsible for the regulations and discipline associated with the ordinance.

CONCLUSION

The Yukon Territories and Prince Edward Island are the only remaining regions where denturist legislation is not in force or pending. Claims are made by the provincial denturist societies that they are providing in excess of 60 per cent of the regional removable prosthodontic needs. This claim has not been verified but undoubtedly they are having an effect on the cost of denture services in some provinces.²⁶

The final paper in this series will elaborate on the current status of legislation governing denturists, the number of registered denturists in each province, the services they provide and their future ambitions.

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REFERENCES

- 1 Report of the Ontario Council of Health Task Force on dental Technicians. March 1972.
- 2 The Dental Technologist Act, Bill 203, 1972. Queen's Printer, Toronto.
- 3 An Act to provide for the Licensing and Practice of Denture Therapists. Bill 246, 1972. Queen's Printer, Toronto.
- 4 An Act to Amend the Dentistry Act. Bill 204. 1972. Queen's Printer, Toronto.
- 5 Pierce, M.H. Denture Therapy Services in Ontario Dental Manpower Report, No. 6. The Ontario Ministry of Health, 1980.
- 6 Letter Denturists' Society of Ontario, November 1973.
- 7 Richardson, J.B. Open letter to the profession concerning laboratory services. J Ont Dent Ass 50:31, 1973.
- 8 The Denture Therapists Act 1974. Bill 70. Queen's Printer, Ontario.
- 9 The Globe and Mail, Toronto, September 1971.
- 10 An Act to Provide for the Licensing of Denturists. Ch. 5, 1973. Queen's Printer, Nova Scotia.
- 11 Licensing regulations of the Denturist Licensing Board, January 1975. Queen's Printer, Nova Scotia.
- 12 President, Denturist Society of Nova Scotia. Personal communication, August 1980.
- 13 Brief submitted to the Parliamentary Commission charged with studying Bill 266 prepared by Jacques Fiset, D.D.S., for the Quebec Association of Prosthodontists.
- 14 Professional Code of Quebec, 1973, c43, s.19b. Editor Official du Québec.
- 15 Statutes of Quebec, Ch. 50, Denturologists Act, 1973. Editeur Official du Québec.
- 16 *Ibid.* Division IV 6.
- 17 *Ibid.* Division IV 7.
- 18 *Ibid.* Division IV 8.
- 19 Dental Act Division V 35, 1973. Editeur Official du Québec.
- 20 *Ibid.* Division V27.
- 21 Secretary General of the Order of Denturologists of Quebec. Personal communication, August 1980.
- 22 An Act to provide for licensing of Denturists. Ch. 60, 1976. Queen's Printer, New Brunswick.
- 23 President and Registrar, New Brunswick Denturist Society. Personal communication, August 1980.
- 24 President of Newfoundland and Labrador Denturist Association. Personal communication, August 1980.
- 25 An Ordinance Respecting Dental Mechanics. Ch. 4, 1975.
- 26 MacEntee, M.I., Pearce, C. and Williamson, M. Quantity of removable prosthodontics provided by dentists in B.C. J Canad Dent Assn.

The Denturist Movement in Canada

Part III. Current Status And Potential

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The removable prosthodontic domain of the dental profession has been successfully challenged in most provinces. Confusion prevails in discussions about dental mechanics, denturists, denture therapists or denturologists. Until recently illegal dental technicians were confidently attacked by the provincial dental societies but with time, dentists became frustrated by the small fines and rebuffs dealt to the offenders by the courts. Vigorous lobbying produced parliamentary debate and eventually, laws establishing the right of persons without a formal dental education to make, fit and deliver dentures directly to the public. Between 1958 and 1979 all but two Canadian provinces had enacted legislation supporting this alternative dental service.

This article will outline the present status of this movement in Canada and elsewhere in the Western world.

BRITISH COLUMBIA Governing Body

This was the first province to legally allow dental technicians to make complete dentures directly for the public. The Dental Technicians' Board was constituted according to the Dental Technicians Act in 1958 to supervise the education of dental mechanics, provide for their registration as persons making complete dentures directly for the public, prescribe the qualifications required of applicants wishing registration and generally, to regulate the activities of dental mechanics.

The Board consists of one dental technician, a dental mechanic and three lay people.

Education

With the co-operation of the Provincial Apprenticeship Board, a four-year apprenticeship program combines the training of both technicians and mechanics. A letter from the Public Denturists Society of B.C. to the Minister of

Education in 1974 resulted in the Education Committee of the Provincial Council recommending a study of the "Role of Dental Mechanics in the Dental Health Care Delivery System."¹

In 1975 the Advisory Committee, set up to conduct this study, recommended dental mechanics continue to function as described in the 1958 Act but only on a prescription from a licensed dentist and that an education committee be established by the Dental Technicians' Board to "prepare detailed behavioral objectives for dental mechanics educational program."² The final summary of the Advisory Committee in 1976 states "these recommendations were variously perceived by some as a threat to independence, by others as creating economic restraints and by others as further evidence of the College of Dental Surgeons' determination to control the field of dentistry."

Registration

The Dental Technicians' Board will register as a dental mechanic, anyone who has been registered as a dental technician for four years and who has apprenticed as a dental mechanic making dentures for a further four years.³ The applicant may have practised elsewhere as a dental mechanic for five years but must have a high school diploma and have passed an examination set by the Board. A formal course of education is available in the province in the form of 1,200 hours of technical and clinical courses at the Vancouver Vocational Institute. The courses are similar to the 1,140 hours provided to Dental Technicians except for 360 hours which are devoted to biological material (anatomy, physiology, first aid, occlusion and pathology).⁴ The Board will acknowledge a course of instruction obtained in another province as equivalent to two years of apprenticeship.

Within the last 10 years the board has been accepting for registration as dental mechanics anyone who completed the four-year apprenticeship program without re-

quiring that they be registered as dental technicians. Consequently instead of having a minimum of eight years background dental mechanics can now register after only four years of experience. It is noteworthy that this change has been effected by the board, in defiance of their own regulations.⁵ They are presently in the process of altering the 1968 regulations to allow for this practice and to introduce other changes.

Services

Dental mechanics may fabricate and insert a complete denture for a person who has obtained a Certificate of Oral Health, that attests to the health of the mouth, signed by a dentist or a medical practitioner.

Ambitions

The Public Denturists Society in 1978 presented a brief to the Minister of Health requesting that its members be permitted to: a) regulate their own affairs independently of the present Regulating Committee of the Dental Technicians Board (the society considers this Committee particularly inept since it has failed to establish a formal education for dental mechanics); b) make removable partial dentures and immediate complete dentures; c) work without a Certificate of Oral Health; and d) change their official name to "Denturists". The Minister has not acted on these recommendations.

Population

There are 155 dental mechanics operating in British Columbia. Approximately 70 per cent of them belong to the Public Denturists Society of British Columbia.⁶

ALBERTA

Dental technicians defying the Dentistry Act in Alberta maintained a close liaison with their colleagues in B.C. In 1961 their activities became legal when the Certified Dental Mechanics Act was passed.

Governing Body

The Act is regulated by a council of The Alberta Certified Dental Mechanics Society. A Board of Examiners, appointed by the Lieutenant Governor in Council, sets practical and theoretical examinations for applicants wishing to register as certified dental mechanics. Applicants must be 21 years old, have five years practical experience making dentures (at least two years in Alberta), have a high school diploma, be free of disabilities and be of good moral character.⁷

Services

Further independence from the dental profession was achieved with an amendment to the Act in 1965 that eliminated the dental "Certificate of Oral Health" re-

quirement and allowed dental mechanics to make complete and immediate dentures without dental supervision.

Education

A two-year course is available for 24 students annually at the Northern Alberta Institute of Technology in Edmonton and students from British Columbia, Saskatchewan and Manitoba are also eligible to enroll. The 2,100-hour course is principally involved in complete denture construction. After a further two years' experience in a certified dental mechanic's office, a graduate is eligible for the board's proficiency examination.

Population

There are 130 registered dental mechanics in Alberta of whom 100 are members of the Denturist Society of Alberta.⁸ Their services are recognized by several major insurance companies as well as the Civil Service Association and the Government of Alberta.

SASKATCHEWAN

Services

The Denturists Act of 1977 allows a denturist to provide complete dentures without dental or medical supervision. A partial denture technician may make removable partial dentures on prescription from, and in co-operation with, a dentist. This Act is considered progressive by most denturists in Canada and the public stature of this new health group is such in Saskatchewan that they may be employed by, or enter into a contract with, a government agency or department or approved hospital.

Governing Body

The Board of Directors of the Denturist Society of Saskatchewan assumes the responsibilities for administering the Act and its regulations.

Education

Applicants registering as a denturist must be at least 18 years old and have taken a course of instruction in complete upper and lower dentures approved by the Board of Directors. There is no denturists' education centre in Saskatchewan but, by interprovincial agreement, three students are accepted annually from Saskatchewan into the Northern Alberta Institute of Technology.⁹ This course does not provide intra-oral experience in removable partial denture design, fabrication or maintenance.¹⁰ This experience must be gained under the direct supervision of a registered partial denture technician. There is a mandatory requirement that every licence-holder obtain training in oral pathology and sanitary practice and hygiene.

Population

Two of the 53 registered denturists are restricted to providing only complete dentures.⁸ The remainder are licensed as partial denture technicians.

MANITOBA

Services

Despite the confusion and debate following the introduction of the 1970 Manitoba Dental Mechanics Act, dental mechanics legally provide complete dentures and illegally make removable partial dentures in Manitoba.

Education

Student dental mechanics can obtain training as apprentices to a licensed dental mechanic in the province at Ontario's George Brown Community College, or at the Northern Alberta Institute of Technology.

Governing Body

The Dental Mechanics Advisory Committee is appointed from two members of the University of Manitoba Faculty of Dentistry, two members recommended by the Denturist Association of Manitoba and two lay members, usually from the Department of Health and Community Services. The minister is empowered by the Act to appoint inspectors who assist in the enforcement and administration of the Act. The minister also provides secretarial services to the Advisory Committee and, at present, the Dental Advisory Committee's Administrator is also recognized as the chief dental mechanic inspector.

Ambitions

The Denturist Association of Manitoba is seeking legislation that would allow its members to make removable partial dentures and to use the title "denturist" to describe their practice.

Population

There are 55 licensed dental mechanics working in Manitoba.¹¹

ONTARIO

Services

The 1972 Denture Therapist Act permitted a denture therapist to make dentures only with direct dental supervision. In 1974 a new Act was passed distinguishing two denture therapists — an unsupervised denture therapist who can make complete dentures and a supervised denture therapist who can make removable partial dentures in a dental office or clinic and under the direct supervision of a dentist. Disagreement on what constitutes dental supervision continues between the dentists and the denture therapists.¹²

Governing Body

The Governing Board of Dental Technicians is composed of three members, representing the public interest and the six denture therapists.¹²

Education & Licensing Requirements

Fifteen new denture therapists graduate annually from George Brown College in Toronto. The course is designed to educate the students to a level comparable with dental hygienists in Ontario.¹³ The two-and-a-half-year program is recognized by the Governing Board as the necessary requirement for registration.

Population

There are 352 licensed denture therapists working in Ontario. Approximately 67 practise supervised denture therapy in dental offices.¹² Until recently, therapists were working well with dentists, both independently and under direct supervision. They are represented by the Ontario Association of Denture Therapists.

A larger group of denture therapists unwilling to accept supervision is represented by the original Denturist Society of Ontario.

Ambitions

In April 1979, both societies produced a joint submission to the Minister of Health suggesting that there were problems with the existing dentists' supervision.¹⁴ They claim that since January 1975 they have made more than 50,000 removable partial dentures illegally without dental supervision. They request that this service be legalized and they challenge dentists to show an increased occurrence of dental disease associated with their work.

There are still two denture clinics operated by dentists, one in Kitchener and one in Sudbury, providing low cost dentures.

QUEBEC

The poor dental health of the people of Quebec and the confusing legislation established in 1973 has nourished the Professional Corporation of Denturologists of Quebec.

Education

There is a three-year program of study in dental technology available at the Édouard Montpetit College in Montreal. Courses are provided for dental technicians in anatomy, biology, microbiology, physiopathology, etc., which are applicable to the practice of denturology. Dental technicians may then apprentice for one year with a denturologist to gain clinical experience before taking the professional examination.

Governing Body

The Interprofessional Council of Quebec regulates this professional group and attempts to implement the Certificate of Oral Health provision of the Denturologists Act,

but until recently little co-operation was received from either the dentists or the denturologists. The dentists are reconsidering this relationship and are starting to provide examinations and to sign certificates for patients who wish to attend a denturologist. Some dentists have a denturologist working in their offices.

Services

The public can receive any removable prostheses from a denturologist including complete, immediate and removable partial dentures.

Population

There are about 706 denturologists registered in the province.¹⁵

NOVA SCOTIA

Governing Body

The Denturist Licencing Board is the regulating body

of the 1973 Denturist Act. The dental representative provided by the Nova Scotia Dental Association to the Denturist Licencing Board was withdrawn after the regulations were approved in 1975. This vacancy was filled by a denturist so that, there were three denturists on the Board, one more then intended by the Denturist Act. Recently a new board has been appointed, which consists of three laymen, a dentist, a dental technician and two denturists and is in accordance with the Act.

Education

According to the regulations, an educational institute in Nova Scotia was prescribed as a training school for the practice of denture technology. The Nova Scotia School of Denturism was established in 1976 at the Dartmouth Vocational School and graduates about 10 students per year who article in an approved denturist's clinic in Nova

Table I
Legal Status of Denturists in Canada

Province	Title Number*	Educational Requirements	Services Provided
British Columbia	Dental Mechanic 155	4 year dental technician & 4 year dental mechanic apprenticeship & Exam	CD with C.O.H.
Alberta	Dental Mechanic 130	2 year formal course & 2 year apprenticeship & Exam	CD & Imm. unsupervised
Saskatchewan	Denturist 53	2 year formal course & Exam	CD unsupervised & RPD on Rx from dentist.
Manitoba	Dental Mechanic 55	Apprenticeship or 2-2½ year formal course	CD with C.O.H.
Ontario	Denture Therapist 352	2½ years formal course & Exam	CD unsupervised RPD supervised
Quebec	Denturologist 706	3 year formal course & 1 year apprenticeship & Exam	CD, RPD & Imm. on Rx or with a C.O.H.
Nova Scotia	Denturist 38	2 year formal course & 1 year apprenticeship & Exam	CD unsupervised
New Brunswick	Denturist 37	Part time formal course & Exam	CD unsupervised
Northwest Territories	Dental Mechanic 0	Valid licence elsewhere	CD unsupervised

CD: Complete dentures; Imm: Immediate complete dentures

RPD: Removable partial denture; Rx: prescription from a dentist

C.O.H.: Certificate of Oral Health

*Information obtained June, 1980

Scotia for one year. They are eligible for a permanent licence upon successful completion of an examination. Graduates from courses in denture technology outside Nova Scotia are also eligible for examination and a permanent licence after articling for one year.

Services

Denturists may make complete dentures without dental supervision. The maximum fee that denturists may charge for complete dentures is prescribed by the Licencing Board, and the fee is reviewed every two years.

Population

There are 38 licensed denturists practising in Nova Scotia.¹⁶

Ambitions

The Denturist Society is actively lobbying for legal permission to make removable partial dentures and wants to have the dentist and the dental technician replaced by denturists on the Denturist Licencing Board.¹⁶

NEW BRUNSWICK

Governing Body

The 1976 Denturist Act specifies that the Denturist Licencing Board will consist of seven members representing the following: dental surgeons, dental technicians, denturists and members of the public. The Minister of Health is responsible for operating the Act. Examinations for registration are conducted by three licensed denturists, one dentist and a lay person appointed by the Lieutenant Governor in Council. This group constitutes the Denturists Examination Committee.

Education

Candidates, before they sit the licensing examination, are required to attend courses or seminars in gross anatomy, biology, physiology, therapeutics, oral medicine, oral pathology and complete dentures. The examination is both written and clinical and can be attempted only twice.

Services

Denturists may make complete dentures without dental supervision.

Population

There are 37 licensed denturists in New Brunswick and they are required to belong to the New Brunswick Denturist Society.¹⁷

Newfoundland and Labrador

There are approximately 15 denturists without legal status working in this province and legislation is pending to provide a Denturist Act similar to Saskatchewan.¹⁸

Prince Edward Island

Until denturists are established in Newfoundland, little effort will be made to obtain recognition in Prince Edward Island.¹⁹ Local dentists are opposed to denturists working on the Island.

Yukon Territories

The Dental Profession regulates the activities of the dentists and dental technicians in the Yukon. Technicians who wish to make dentures directly for the public have no legal status although since approximately 1967 there has been at least one technician who has been operating as a denturist in Whitehorse.²⁰

Recently the Yukon Denturist Association was formed to further the aims of denturism in this Northern territory. It is affiliated with the Canadian National Association of Denturists and has five members, mostly non-residents of the Yukon. A brief presented to the Legislative Assembly of the Yukon in 1980 requests an ordinance to regulate the profession of Denturism independent of the dental profession.

There is one dental technician, who has taken the National Association of Denturists' examination, providing a full removable prosthetic service directly to the public. Very little co-operation exists between this technician and the dentists who work in the territories.²⁰

The Canadian National Association of Denturists

This organization was formed in 1967 after the dental mechanics in British Columbia and Alberta had obtained legal recognition. Initially a group of denturists from the two Western provinces met to promote the cause of all dental technicians who wished to provide a total removable prosthodontic service directly to the public. Within three years members were admitted from Saskatchewan and Manitoba. Following the recognition of dental mechanics in Manitoba in 1972 a meeting was held in Regina and, accompanied by delegates from Nova Scotia, the national association was recognized. Membership was sought and obtained from across the country and the 800 members represent the Yukon Territories and all of the provinces with the exception of Quebec and Prince Edward Island.¹⁹ The association was incorporated in 1975.

The association has established educational aims and is promoting a national standard of removable prosthodontic services and national denturist licensing requirements. It achieved significant recognition in Saskatchewan when the provincial government accepted the assistance of three examiners from the association during the initial examination of denturists in 1978. A similar offer has been made and accepted in New Brunswick and negotiations

are under way to continue this examining role in Newfoundland.

In January, 1980 the first edition of "The Denturist", a journal of provincial and national news of interest to denturists, was published.

Denturists' Activities Outside Canada

Canada has not been alone in the denturist-dentist battle. As early as 1843 controversy between dentists, physicians and professional "turners" in Denmark resulted in a court opinion ruling that making dentures did not require medical knowledge. The dental technicians, evolving from the turners' profession, claimed that this court ruling permitted them to work directly for the public. In 1979 an Act of the Danish Parliament was passed allowing clinical dental technicians to make complete dentures without supervision. They must obtain approval from a dentist before providing removable partial dentures. Approximately 700 dental technicians are eligible for a licence under this new Act. There are plans to provide an education consisting of 2½ years in a dental technicians' college, two years in a university and a final year working with a dentist or a denturist.

Finland has had denturists for 37 years. Before they can obtain a licence they must undergo nine years of apprenticeship.

The cantons of Zurich and Appenzell in Switzerland are the only other European regions where independent dental technicians can work for the public. Legislation is pending in Austria, Ireland, Germany and Holland.

The States of Maine, Colorado, Arizona and Oregon legally recognize the services of denturists and other states are debating the question.

In Australia "denturist" legislation exists in Tasmania, Victoria, and New South Wales and is being prepared in South Australia. In New South Wales they are called dental prosthetists and are permitted to make complete and partial dentures for patients with "apparently healthy" mouths. Not all of the above states permit technicians to make partial dentures.²¹

CONCLUSION

The existing legislation and the pending or proposed legislation in every Canadian province and territory indicates that the provision of dentures by persons educationally less qualified than dentist is an accepted part of Canadian life. There are at least 1,526 such persons legally licensed to provide this service in Canada, (Table I), and the political organization demonstrated by the denturist societies and associations is formidable. Until denturists are licensed across Canada to make complete dentures,

immediate dentures and removable partial dentures without dental supervision, we can expect to see continued vigorous political lobbying. With so much gained they will not stop until their future is insured as the principal providers of all removable prosthodontic services.

Acknowledgement

Each part of this series of three articles was written with considerable input from many dentists and denturists across Canada. I am particularly grateful to Mr. George Connolly, Secretary of the National Denturist Association of Canada, and those members of the Association of Prosthodontists of Canada who personally verified much of the information presented.

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REFERENCES

- 1 British Columbia Medical Centre Act., Ch. 1973, Queen's Printer, B.C.
- 2 Study on the Role of Dental Mechanics in the Health Care Delivery System. Presented by the British Columbia Medical Centre Division of Educational Planning, March, 1975.
- 3 Dental Technicians Act of B.C. General Regulations, 1968.
- 4 Dental Mechanic Program Content Guide. Vancouver Vocational Institute 1979.
- 5 Executive Secretary, Dental Technicians Board of B.C. Personal Communication March 1981.
- 6 Ibid. August 1980.
- 7 Regulations Under the Certified Dental Mechanics Act. 334/61, Queen's Printer, Edmonton.
- 8 Interprovincial Denturist Course Agreement Signed Star, Phoenix, Saskatoon, August 30, 1979.
- 9 President, Denturist Society of Alberta, Personal Communication August 1980.
- 10 Registrar, Denturist Society of Saskatchewan Personal Communication August 1980.
- 11 Past President, Denturist Association of Manitoba. Personal Communication August 1980.
- 12 Pierce M.N., Denture Therapy Services in Ontario, Dental Manpower Report No. 8, The Ontario Council of Health, 1980.
- 13 The George Brown College of Applied Arts and Technology, Division of Allied Health Auxiliaries — Programme Descriptions, September 1978.
- 14 Joint Submission of the Denturists Society of Ontario and The Ontario Association of Denture Therapists to the Minister of Health for Ontario, April 5, 1979.
- 15 Secretary General of the Order of Denturologist of Quebec; Personal Communication, August 1980.
- 16 President Denturist Society of Nova Scotia; Personal Communication, August 1980.
- 17 President and Registrar New Brunswick Denturist Society, Personal Communication, August 1980.
- 18 President Newfoundland & Labrador Denturist Association; Personal Communication, August 1980.
- 19 Secretary and Registrar of the Denturist Association of Canada, Personal Communication, August, 1980.
- 20 Secretary Yukon Denturist Association, Personal Communication, August 1980.
- 21 Dental Technicians' Legislation passed in New South Wales, News Item, Brit. Dent. J. 146(7): 223 April 1979.

A method of analyzing the form of individual human teeth

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ABSTRACT

A photographic method of comprehensively recording the three-dimensional form of individual human teeth is described. The equipment consists of a metal frame cube within which the tooth is placed and a camera and telephoto lens placed five feet from the cube. A series of five photographs is taken of each tooth and used to measure its form. The technique is being used to quantify tooth form and its variation in man and other mammals.

The measurement of teeth plays an important role in research in dentistry, anatomy and anthropology. Numerous studies are undertaken in which such parameters as the mesio-distal and bucco-lingual crown dimensions are obtained using vernier calipers. Single linear measurement provides only a very limited mathematical description of the complex form of a tooth, and some attempts have been made to examine crown form in a more comprehensive manner.¹

A number of methods of studying crown form have been applied to dental casts. Singh and Savara² have used a simple photocopying process to accurately measure teeth and arches, while photography has also been successfully applied.^{3,4} Savara⁵ has employed sophisticated stereo photogrammetric equipment to obtain contour plots of crown form. Unfortunately, analysis of dental

casts provides a very limited opportunity to examine the form of the entire tooth, much of which is obscured by bone and gingivae; access is also restricted to the interproximal aspects. The detailed shapes of individual teeth are technically difficult to analyze with a high degree of precision, since individual parameters can only be integrated in an 'artificial' mathematical way, providing such measures as the crown index.

A similar situation existed in craniometry prior to the advent of radiographic cephalometry. The development of this technique.^{6,7} now gives us not only the opportunity to precisely examine growth changes in living individuals, but also allows us to study craniofacial form in great detail in the context of three-dimensional space, using angular measurements, peripheral outlines, etc. Such assessments cannot be made using calipers.

Studies by the author^{8,9} have shown that angular measurements are under strong genetic control, and thus can be used to assess and compare skull shape in various mammals. These investigations have now been extended to examine tooth form variation and the possible relationship which it may have to variations in craniofacial form. It was apparent from the outset that in order to study, in detail, the form of individual teeth, in a manner comparable to that afforded by radiographic cephalometry, a new technique had to be devised. The method described below is a modification of a photogrammetric technique devised by the author¹⁰ for the study of mammalian bone form.

EQUIPMENT

The basic principle of the technique is to obtain photographic records of the tooth from a number of directions precisely at right angles to one another. The recording system comprises a metal cube frame in which the tooth is positioned, and a camera with telephoto lens (**Fig. 1**). A solid piece of Duralium is milled to produce a perfect cube with sides of precisely equal length. The interior is then drilled out until a sturdy framework of metal remains. A vertical tube accommodating rods of variable length is attached centrally to a framework in one face, chosen as the base. This pole assembly permits a tooth to be mount-

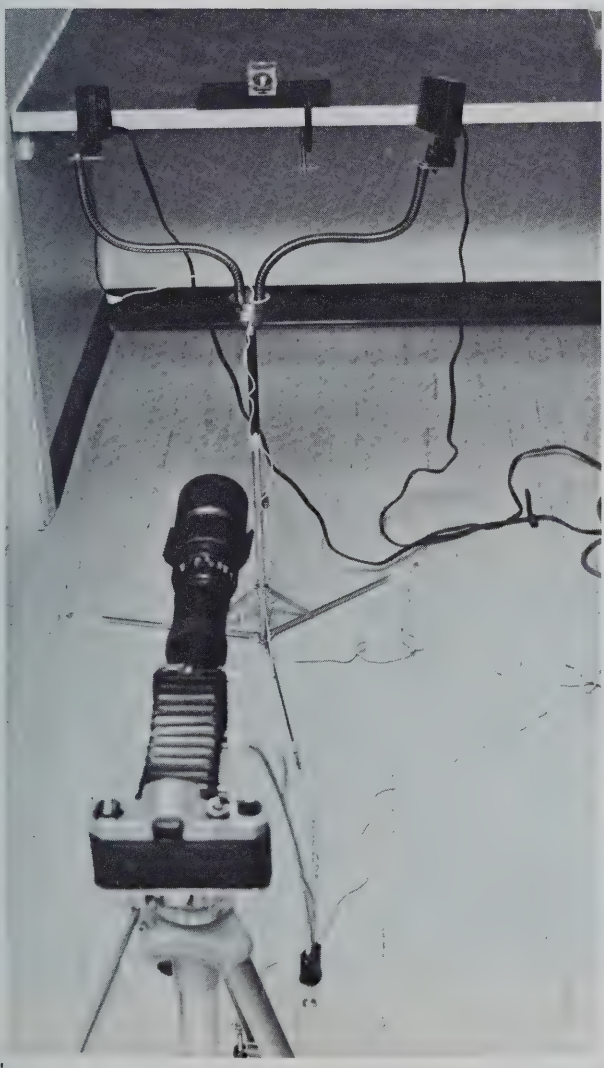


Fig 1: Photographic set-up showing tooth in orientation cube and associated camera with telephoto lens.

ed on it. Precisely positioned fine cross wires used to facilitate orientation are then placed centrally on each face of the cube, using a series of slots and holes, so that the wires can be removed prior to photographing the tooth (**Fig. 2**). The entire cube is then seated in a precisely fitting square base receptacle designed for this purpose. The recording system is established by firmly fixing this receptacle, containing the cube, on a horizontal surface. A single lens reflex camera with attached 400 mm telephone lens is then positioned on a sturdy tripod, so that the front face of the lens lies exactly five feet from the centre of the cube, and the intersecting cross wires on opposite sides of the cube are precisely superimposed and lie centrally in the field of the viewfinder. A series of extension tubes or variable extension bellows must be interposed between lens and camera to obtain the desired field size and image sharpness. The lens is stopped down to f22 to provide sufficient depth of focus.

PHOTOGRAPHIC PRINCIPLE

The largest interval between cube and camera is necessary, because the projection of any three-dimensional object onto a two-dimension film creates a 'distortion'. In other words, the front face of the perfect cube will always register as slightly larger than the rear face, which is fur-

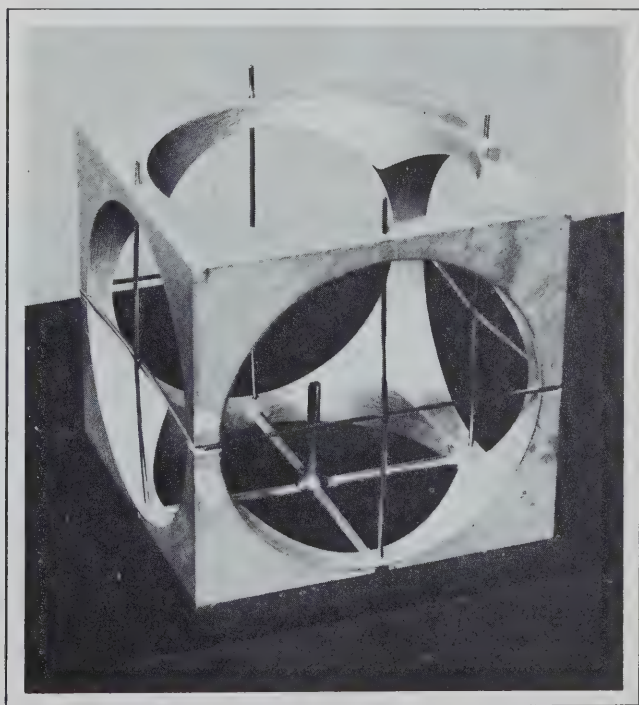


Fig 2: Orientation cube with attached cross wires.

ther from the camera. The magnitude of the difference is dependent upon the camera/cube separation (at infinity no difference will be observed). Tests using a measuring grid situated at various points corresponding to the space occupied by the cube indicate that 'distortion' is minimal, e.g., a line representing the rear edge of the cube of length 100 units becomes 101.93 units when corresponding to the front edge of the cube. There is, thus, a magnification range of approximately 2 per cent of absolute values. The 'distortion' actually incurred is much less because the tooth occupies a smaller region inside the cube. The absence of significant distortion is also confirmed in **Figure 3**, which illustrates the coincident boundaries presented by a series of integrated tracings of five views of a premolar tooth.

In photography, there also exists the possible distortion created by optical lens inaccuracies. There are a variety of such aberrations, but the most relevant ones are 'barrel' and 'pin cushion' distortion in which straight lines at the field peripheries are bent outwards or inwards. Tests by the author have shown that, in even the cheapest modern telephoto lenses, such effects are not detectable.

RECORDING PROCEDURE

The tooth is placed on the vertical pole and held by an adhesive, e.g., plasticine, in a precisely defined orientation chosen by the operator. Precise positioning is achieved by

using the parallax principle, by sighting on the vertical and horizontal cross wires on opposite faces of the cube. The wires are then removed and a series of photographs taken, with a different face of the cube presented to the camera on each occasion. This is done by lifting the cube out of its seating base and relocating it on each face in turn, while the tooth inside maintains a constant orientation relative to the cube frame. Thus, a series of five views (base excluded) of each tooth is obtained. The lighting consists of two synchronized flash guns. The very short exposure duration thus attained is essential for optimum image sharpness, since long exposures can produce serious blurring due to camera vibration. The fine grain black and white film which is used is subject to standardized development procedures.

The resulting negatives are projected through a photographic enlarger, which is adjusted so that one edge of the image of the orientation cube corresponds exactly with a marker scale set on the paper easel. The scale is calibrated to correspond exactly to the true length of the cube. An entire photographic series is then made with the enlarger in that set position. Thus, the prints obtained provide a true size rendering of the tooth.

The photographic paper used must be dimensionally stable, e.g., Ilford-Ilfoprint. A stabilization printing process is used in which the exposed paper is passed through two fluid baths by a series of rollers, and comes out semi-dry. This technique is necessary because the immersion of

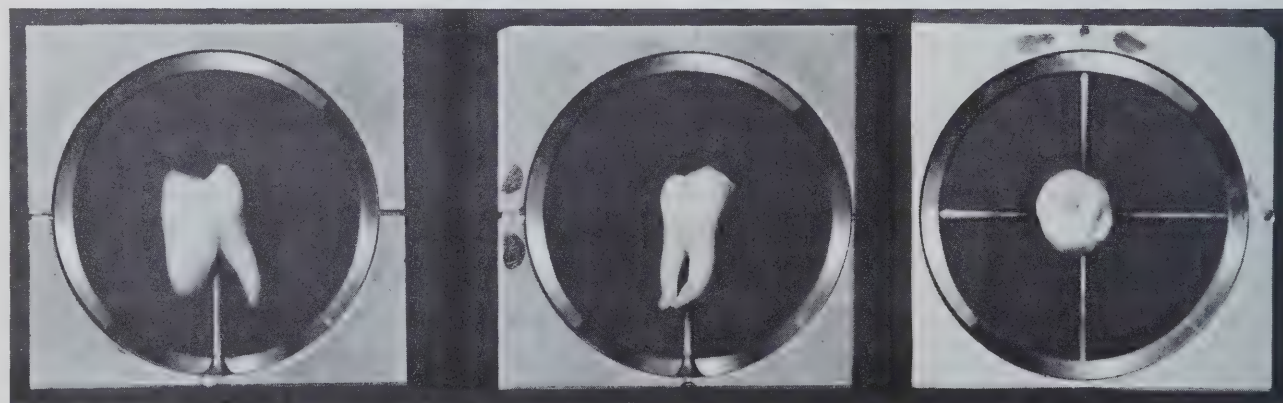


Fig. 3 Three views of a molar tooth mounted in the orientation frame. (Note that in these photographs the telephoto lens was not used, and therefore the perspective is not precisely correct.)

(Note that in these photographs the telephoto lens was not used, and

standard bromide papers in processing fluids causes expansion of the paper. This expansion is followed by variable, uneven and unpredictable contraction during drying,^{11,12} which is of sufficient severity to preclude its use for precise measurement purposes. The structural instability of these papers is an inherent property of paper itself.¹³

ANALYSIS OF RECORDS

All the photographs of one tooth are printed at precisely the same known magnification, using the cube as a reference frame and scale. Three individual views of a molar tooth are shown in **Fig. 3**. The pictures are set up in a coordinated fashion, and thus, a series of integrated views are obtained. The traced outlines of a premolar tooth are demonstrated in **Fig. 4**. These records may be measured in a variety of ways; direct measurement of lines and angles may be carried out on the photographs, or automated plotting equipment may be used to record the position of points, and the resulting data computer-processed, using a suitable program designed to yield linear and angular measurements.¹⁴

CONCLUSIONS

The above method provides a simple, relatively economical way of studying large quantities of teeth. The photographic records permit comprehensive and accurate

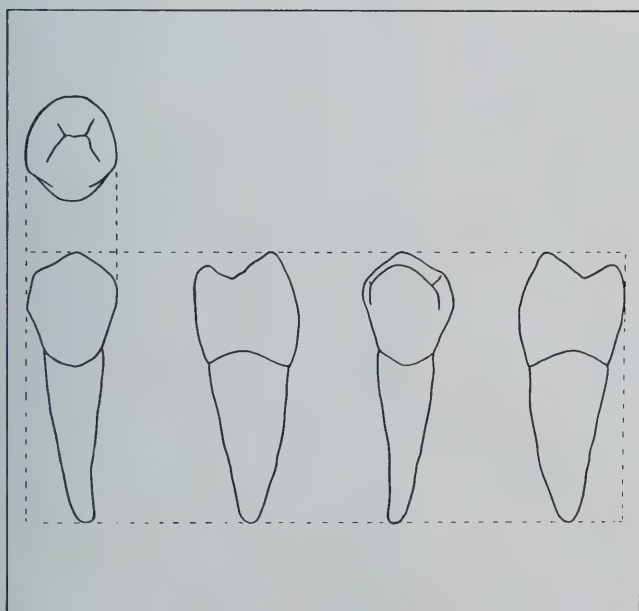


Fig 3: Integrated tracing series for the five views of an upper premolar tooth. (Note the coincident peripheral boundaries.)

assessment of tooth geometry in the three-dimensional context. The technique is, of course, applicable only to extracted teeth or teeth lost or removed from skeletal material. If however, we are to achieve a full understanding of the variations present in human teeth, we must carry out detailed examinations of the individual tooth. The extensive descriptive study by Taylor¹⁵ of human tooth form, has demonstrated an enormous range and complexity of variation. We must now attempt to usefully quantify and thus understand human tooth form variation. The method described here is presently being used by the author to further understand of the nature and extent of such variability, and the underlying processes involved in creating those variations.

Dr. McKeown is associate professor in the Department of Oral Biology and the Department of Anthropology and Archaeology, University of Saskatchewan, Saskatoon, Sask.

Reprint requests to: Dr. Maurice McKeown, Department of Oral Biology, College of Dentistry, University of Saskatchewan, Saskatoon, Sask. S7N 0W0.

REFERENCES

- 1 Biggerstaff, R.H. The basal area of the posterior tooth crown components. The assessment of within tooth variation of premolars and molars. *Am J Phys Anthropol* 31:163, 1969.
- 2 Singh, I.J. and Savara, B.S. A method of making tooth and dental arch measurements. *J Am Dent Ass* 69:719, 1964.
- 3 Biggerstaff, R.H. Electronic methods for the analysis of the human post-canine dentition. *Am J Phys Anthropol* 31:235, 1969.
- 4 Hechter, F.J. Symmetry and dental arch form of orthodontically treated patients. *J Canad Dent Ass* 44:173, 1978.
- 5 Savara B.S. Application of photogrammetry for quantitative study of tooth and face morphology. *Am J Phys Anthropol* 23:427, 1965.
- 6 Hofrath, H. Die Bedeutung der Röntgenfern und Abstandsaufnahme für die Diagnostik der Kieferanomalien. *Fortschritte Orthodontik* 1:232, 1931.
- 7 Broadbent, B.H. A new x-ray technique and its application to orthodontia. *Angle Ortho* 2:45, 1931.
- 8 McKeown, M. Genetic and environmental influences on the shape of the adult dog skull. *Angle Ortho* 44,2:62, 1974/
- 9 *Idem*. The influence of environment on the growth of the craniofacial complex. A study on domestication. *Angle Ortho* 45,2:137, 1975.
- 10 *Idem*. Photogrammetric osteology. *Napao* 10:27, 1980.
- 11 Gavin, J.A., Washburn, S.C. and Lewis, P.A. Photography: an anthropometric tool. *Am J Phys Anthropol* 10:331, 1952.
- 12 McKeown, M. Studies on craniofacial growth in the dog. Ph. D. thesis, Queen's University, Belfast, Northern Ireland, 1972.
- 13 Corte, H. Fundamental properties of paper. *School Science Review XLVII*, 162:331, 1966.
- 14 Cleall, J.F. and Chebib, F.S. Coordinate analysis applied to orthodontic studies. *Angle Ortho* 41 :214, 1971.
- 15 Taylor, R.M.S. Variation in morphology of teeth; anthropologic and forensic aspects. Springfield, Illinois, Thomas, 1978.

Announcements

CANADA

Canadian Dental Association, 1981 National Convention, Calgary, Alberta, August 30-September 2, 1981. Contact: Dr. R.H. Headley, 7811 Elbow Drive S.W., Calgary, Alta. T2V 1K3.

September/septembre

International Association for Orthodontics Annual Meeting, Hotel Toronto, Toronto, Ontario, September 10-13, 1981. Contact: IAO National Office, Suite 914, 211 E. Chicago Ave., Chicago, Ill. 60611, U.S.A.

Northern Ontario Dental Association 41st Annual Convention, Sheraton Caswell Hotel, Sudbury, Ontario, September 11-13, 1981. Contact: Dr. M. MacKelvie, 1132 Attlee Street, Sudbury, Ont. P3A 3J4.

October/octobre

Canadian Academy of Endodontics, 1981 Annual Meeting, Vancouver, British Columbia, October 16-18, 1981. Contact: Dr. Barry Chapnick, 235 St. Clair Ave. W., #103, Toronto, Ont. M4V 1R4. Phone: (416) 922-5115.

American Academy of Periodontology 67th Annual Meeting, Sheraton Centre, Toronto, Ontario, October 21-24, 1981. Contact: Office of the Secretary, American Academy of Periodontology, 211 E. Chicago Ave., Chicago, Ill. 60611, U.S.A.

The Canadian Society of Oral & Maxillofacial Surgeons 28th Annual Convention, Chateau Laurier Hotel, Ottawa, Ontario, October 22-25, 1981. Contact: Dr. Samuel P. Kucey, 239 Argyle, Ottawa, Ont. K2P 1B8, Tel: (613) 232-4203.

November/novembre

Toronto Academy of Dentistry Annual Winter Clinic, Royal York Hotel, Toronto, Ontario, November 26, 1981. Contact: Academy of Dentistry, 234 St. George Street, Toronto, Ont. M5R 2P2.

International September/septembre

International Conference on Mercury Hazards in Dental Practice, Glasgow, Scotland, September 2-4, 1981. Contact: Prof. J.M.A. Lenihan, West of Scotland Health Boards, Dept. of Clinical Physics & Bio-Engineering, 11 West Graham Street, Glasgow G4 9FL, Scotland.

The International Association of Stomatology, Annual Scientific Meeting, Royal College of Surgeons of England, Lincoln's Inn Fields, London, September 3-4, 1981. Contact: Prof. R. O'Neil, University College Dental School, Mortimer Market, London WC1E 6JD, England.

Third World Congress on Pain (Sponsored by the International Association for the Study of Pain), Edinburgh, Scotland, September 4-11, 1981. Contact: Third World Congress on Pain, University of Edinburgh Centre for Industrial Consultancy and Liaison, 16 George Square, Edinburgh, EH8 9LD, Scotland, U.K. or Louisa E. Jones, BS. Executive Secretary, International Association for the study of Pain, Dept. of Anesthesiology RN-10, University of Washington, Seattle, WA 98195, U.S.A.

Fédération Dentaire Internationale, 69th Annual World Dental Congress, Rio de Janeiro, Brazil, September 5-9, 1981.

International Congress on Biomaterials in Stomatology, Pretoria, South Africa, September 18-20, 1981. Contact: Congress Secretary, Faculty of Dentistry, P.O. Box 1266, Pretoria, Republic of South Africa 0001.

October/octobre

21st Annual Meeting of the American Association of Hospital Dentists, Bellevue-Stratford Hotel, Philadelphia, Pennsylvania, October 2-4, 1981. Contact: Ms. C.M. Truclear, Office of Continuing Education, Medical College of Pennsylvania, 3300 Henry Avenue, Philadelphia, Pa. 19129, U.S.A. Phone: (215) 842-7127.

The American Academy of Implant Dentistry's 30th Annual Scientific Program, Kansas City, Missouri, October 19-24, 1981. Contact: Mr. John P. Winiewicz, Executive Secretary, The American Academy of Implant Dentistry, 515 Washington Street, Abington, Massachusetts 02351, U.S.A. Phone: (617) 878-7990.

The 38th Annual Meeting of The Institute of Oral Biology, The Spa Hotel, Palm Springs, California, October 30-November 3, 1981. Contact: Executive Secretary, P.O. Box 481, South Laguna, CA 92677, U.S.A.

November/novembre

New York College of Dentistry's new one month course "Current Concepts in American Dentistry", New York University Dental Centre, 421 First Avenue, New York, New York 10010.

Seventh Convocation of Royal Australasian College of Dental Surgeons, Sydney, Australia, November 9-12, 1981. Contact: Hon. Secretary, Royal Australasian College of Dental Surgeons, Inc., 229 Macquarie Street, Sydney, NSW 2000, Australia.

Swedental Dental Congress and Trade Fair, Stockholm, Sweden, November 18-21, 1981. Contact: A.C. Nackstad, Svenska Tandlakare-Sallskapet, Nybrogatan 53, 11440 Stockholm, Sweden.

The XVI International Congress of the Mexican Dental Association, city of Mexico, November 19-22, 1981. Contact: Dr. Luis Quiroz, Secretary General, XVI International Congress of the ADM, Cerrada de Popocatepetl 51-A, Mexico 13, D.F., Mexico.

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University of Southern California,
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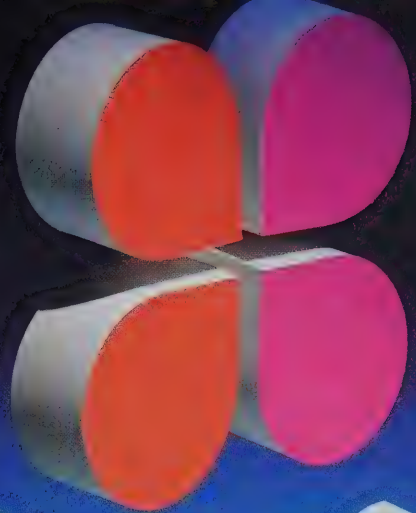
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Editorial**547 Dental Education**

Dr. Douglas Yeo of the University of British Columbia says dental education needs the support of all dentists and calls for an effort to "pinpoint the reasons for the apparent decline in interest in dentistry".

Letters

- 551** A B.C. dentist refuses to recommend Johnson and Johnson products in light of the tariff situation.

In the News

- 553** **Waterloo says yes**
By a narrow margin, Waterloo, Ont. voters have agreed to maintain water fluoridation in the community.

- 554** **Awareness needed**
Noted expert Dr. Norman Levine says more awareness of the needs of the handicapped is required within the dental profession. Dr. Levine is head of the section for dentistry for the handicapped at Toronto's Mount Sinai Hospital.

- 559** **Excerpts from hearing**
Dr. Robert Hicks, chairman of CDA's Taxation Committee, recently appeared before the Senate Standing Committee on Banking, Trade and Commerce. Portions of his discussion with the committee are presented.

- 562** **Institutional Advertising**
The Ontario Dental Association and the Academy of General Dentistry are continuing testing in the area of institutional advertising, while the American Dental Association is cutting back.

- 566** **Economic Council Report**
A recently published report by the Economic Council of Canada reviews occupational regulation and criticizes the dental profession for the restrictive nature of its self-regulation. A summary of the Council's report is given.

569 Hypnosis and dentistry

The art of hypnotism is far from new, but there has been a renewed interest in its use for dental patients who experience fear and stress.

Publications

- 571** **Description and Documentation of the Private Practice Dental Delivery System**
This text contains extensive documentation and is described as "interesting" and valuable for all dentists in reviewing their practice profiles.

- 572** **Handbook of Local Anesthesia**
Photographs are used effectively in what the reviewer describes as a "useful" handbook.

- 573** **Surgical Correction of Dentofacial Deformities**
Dr. B.K. Arora describes this text as a "Bible" of orthognathic surgery.

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- 587** **Change in dental student profiles: Preadmission to pregraduation** — Boyd

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Hypnosis
Dental Education

Journal

de l'Association
Dentaire
Canadienneseptembre
1981

Éditorial

- 548 Le Dr Douglas Yeo, de l'Université de Colombie-Britannique, invite ses collègues à participer à la formation des futurs dentistes et à cerner les raisons d'un désintéressement apparent à l'égard de la médecine dentaire.

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- 551 Un dentiste de Colombie-Britannique refuse de recommander les produits Johnson & Johnson à cause du problème tarifaire.

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- 575 **Un besoin de sensibilisation**
Spécialiste renommé, le Dr Norman Levine souligne que la profession dentaire doit se sensibiliser davantage aux besoins des personnes handicapés. Le Dr Levine dirige le service de médecine dentaire pour les handicapés à l'hôpital Mount Sinai de Toronto.

- 580 **Extraits d'une audience publique**
Le Dr Robert Hicks, président du comité des questions fiscales de l'ADC, a comparu récemment devant le comité sénatorial permanent de la banque et du commerce. Le Journal présente certains extraits de la discussion qu'il a eue avec le comité.

- 583 **La publicité institutionnelle**
L'Ontario Dental Association et l'Academy of General Dentistry poursuivent leur expérience de publicité institutionnelle, tandis que l'American Dental Association réduit la sienne.

- 578 **Rapport du Conseil économique**
Un rapport récent du Conseil économique du Canada fait une revue de la réglementation des professions et adresse des critiques à la profession dentaire pour la nature restrictive de ses propres règlements. Voici les points saillants du rapport sur la question.

- 585 **Hypnose et médecine dentaire**
L'hypnotisme n'est pas un nouvel art, mais il suscite un nouvel intérêt comme moyen d'apaiser la crainte et l'inquiétude de certains patients.

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- 587 **Le profil des étudiants dentaires se modifie: de l'admission au diplôme —**
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- 591 **La clientèle des écoles dentaires dans les années 80 —**
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Hypnose
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DENTAL EDUCATION

Our Canadian dental schools could be called the "fountain of youth" for the dental profession in Canada. It is mainly these institutions which inject trained young men and women into our ranks to take the place of those lost to the profession through death or retirement. At the same time, additional graduates are decreasing the dentist/population ratio in most areas of the country.

It is an invigorating and satisfying experience to be associated with this educational process, but in education as in any other walk of life, one soon finds out that everything is not sweetness and light. Frustrations and problems really do exist. Some of these problems are affecting an educational process which has continually strived to achieve and maintain the highest possible standards. Before these standards suffer, it would seem only prudent to bring some of the problems to light and collectively try to do something about them.

The first and most formidable problem facing any institution, organization, business or individual today is finances. In July, we were told the national inflation rate had surpassed 12 per cent. Consequently, no dental practice can maintain its established position without a corresponding increase in the fees it is able to collect. Likewise no dental school can maintain its established educational program without a corresponding budgetary increase. However, in most dental schools, budgets are remaining static and in some cases, are being drastically reduced.

Dental faculty and staff, like anyone else, deserve salary increases to enable them to keep up with the rate of inflation. Dental schools must equip, maintain, staff, and run a clinical "dental hospital" to enable dental students to get their necessary clinical training. These running costs are escalating at an alarming rate.

Other health science students leave the university setting to obtain most of their clinical training in hospitals not primarily established, maintained or run with educational dollars. Federal, provincial and university authorities who provide and apportion these dollars cannot seem to grasp the significance of this difference and the dental schools suffer inadequate financing as a result. To make matters worse, fees collected for clinical services provided by students in some dental schools are often diverted into general university revenue.

Almost every dental school in North America has reported a significant drop in the number of applicants wishing to study dentistry. In some instances, individual schools have not admitted a full class of students because of an inadequate number of qualified applicants. If the

trend continues, our dental schools and our profession could be in trouble. We should attempt to pinpoint the reasons for the apparent decline in interest in dentistry. Is it because of the stress of running a modern-day dental practice? Is it because of the circulating stories that dentists have the highest rate of divorce, suicide, alcoholism and drug dependence? Is it because the fields of commerce and computer science offer a more lucrative return at a faster rate?

Perhaps organized dentistry is not alarmed at this recent turn of events. Even in provinces which traditionally have had extremely high dentist/population ratios, one hears there is now a sufficient supply of dentists. From many areas in Canada, one hears reports that there are too many dentists. The stock answer to this apparent problem from most quarters is to reduce the class size in our dental schools. But do we really have a manpower problem in this country? Nobody knows for sure, and if it really does exist, are our dental schools the proper answer? Should young Canadians be denied the right to a dental education through reduced class size while we continue to allow dentists to come in from other countries to swell our ranks? Hopefully, a national manpower study will provide an accurate assessment of the situation so we can make some intelligent plans for the future.

Every single member of the profession in one way or another is vitally interested in the quality of dental education. If your son or daughter is a dental student, you want him/her to get the best possible training. As a graduate of a particular dental school, you are anxious that your training be recognized by other dental schools and licensing authorities across Canada. As a dental practitioner, you are interested in seeing that highly competent new dentists come in to practise alongside you. As a dental educator, you achieve a sense of pride and accomplishment by providing a high standard of dental education. As someone who is responsible for registering and licensing dentists in this country, you are anxious to be assured you are registering competent individuals. As a member of organized dentistry, you wish to see the integrity and reputation of your profession maintained. How can all this be accomplished?—by an efficient and effective accreditation program which holds the respect and confidence of the profession, the educational institutions and the registration and licensing authorities.

Finally, dental education today needs the support of each of us who has had the privilege of benefiting from its offerings in the past.

*Dr. Douglas J. Yeo,
University of British Columbia*

NOS ÉCOLES DENTAIRES ONT BESOIN D'APPUI

Les écoles dentaires du Canada sont la "fontaine de jouvence" de la profession au pays. Ce sont elles, surtout, qui injectent du sang nouveau dans ses rangs et lui permettent de se renouveler constamment. Si elle aide à combler les vides (décès ou retraites), l'arrivée des nouveaux diplômés réduit cependant le rapport dentiste-population dans la plupart des régions.

Participer à la formation des futurs dentistes est une expérience vivifiante et une source de satisfaction mais, comme dans les autres domaines d'activité, ce n'est pas toujours rose et on se rend vite compte des frustrations et des problèmes. Certains de ces problèmes affectent l'enseignement de la profession qui a toujours cherché à atteindre et à garder le plus haut degré d'excellence. Avant donc que celle-ci ne soit sérieusement compromise, il serait prudent d'en parler ouvertement et de chercher collectivement à y apporter des solutions.

De nos jours, le premier problème que doit surmonter toute institution, organisation ou entreprise, ou même chaque personne, c'est celui des finances. Au mois de juillet, on nous disait que le taux d'inflation avait dépassé les 12 pour cent au pays. On comprendra donc qu'aucune pratique dentaire ne peut se maintenir sans augmenter proportionnellement ses honoraires. De même, aucune école ou faculté de médecine dentaire ne peut poursuivre son programme d'enseignement sans voir son budget augmenter dans la même proportion. Néanmoins, le budget de la plupart des institutions d'enseignement dentaire est demeuré le même et pire, il a diminué de façon draconienne dans certains cas.

Chez les facultés de médecine dentaire, le corps professoral et le personnel de soutien méritent, comme tout le monde, des augmentations de salaire qui leur permettent de suivre le rythme de l'inflation. Les facultés doivent aussi équiper, doter en personnel et maintenir des cliniques universitaires pour donner à leurs étudiants une formation pratique. Par contre, dans d'autres secteurs des sciences de la santé, les étudiants quittent le campus universitaire et vont chercher leur formation en clinique dans des hôpitaux dont les frais d'établissement, d'entretien et d'exploitation ne sont pas d'abord imputés aux budgets affectés à l'éducation. Les administrations fédérales, provinciales et universitaires, qui fournissent et répartissent ces fonds, ne semblent pas comprendre qu'il y a là deux situations bien différentes et ce sont les facultés de médecine dentaire qui en souffrent, ne recevant pas de financement adéquat. Et pour empirer les choses, certaines facultés voient les revenus de leurs cliniques gagnés par leurs étudiants, versés au fonds général de l'université.

Presque toutes les écoles dentaires d'Amérique du Nord ont fait état d'une baisse importante du nombre des candidats aux études dentaires. Certaines d'entre elles n'ont même pas pu remplir une classe faute de candidats qualifiés. Si la tendance se maintient, nos écoles comme la

profession elle-même risquent de connaître certaines difficultés et il vaut la peine de cerner les raisons de ce désintéressement apparent. Est-ce à cause de la tension qui accompagne l'exploitation d'une pratique dentaire moderne? Est-ce à cause des racontars à l'effet qu'on trouve chez les dentistes les plus hauts taux de divorce, de suicide, d'alcoolisme ou d'usage de stupéfiants? Est-ce parce que les secteurs du commerce ou de l'informatique offrent des perspectives plus lucratives?

Peut-être que l'organisation de la profession ne s'inquiète pas de la tournure récente des événements. Même dans les provinces où le rapport dentiste — population est extrêmement élevé depuis fort longtemps, on dit qu'il y a actuellement suffisamment de dentistes. Dans plusieurs régions du pays, par contre, on se plaint qu'il y en a trop. Devant ce qui semble être un problème, on répond généralement, un peu partout, qu'il suffit de réduire le nombre des étudiants dans les facultés dentaires. Mais, y a-t-il vraiment un problème de main-d'oeuvre professionnelle au pays? Personne ne le sait exactement. Dans l'affirmative, faut-il en chercher la solution auprès des facultés? Doit-on refuser aux jeunes Canadiens le droit d'étudier la médecine dentaire en réduisant le nombre des élèves par classe, alors qu'on continue de grossir nos rangs en acceptant des dentistes venant de l'étranger? Il est à espérer qu'une étude globale nous permettra de connaître exactement la situation dans tout le pays et que nous pourrions alors bien planifier l'avenir.

Chaque membre de la profession est, d'une façon ou de l'autre, vivement intéressé à la qualité de l'enseignement dentaire. Si votre fils ou votre fille se prépare à suivre vos traces vous voulez qu'il ou elle reçoive la meilleure formation possible. A titre de diplômé d'une faculté de médecine dentaire, vous vous attendez à ce que votre formation soit reconnue par les autres écoles dentaires du pays comme par les administrations publiques qui vous permettent de pratiquer dans les diverses régions. A titre de praticien de la médecine dentaire, vous souhaitez voir de jeunes collègues tout aussi compétents pratiquer à vos côtés. Si vous enseignez la médecine dentaire, vous cherchez fierté et satisfaction dans l'excellence de votre enseignement. A titre de responsable de l'agrément et de la délivrance des permis pratique dentaire au pays, vous voulez assurer de la compétence des candidats. A titre de membre d'une profession organisée, vous souhaitez en préserver l'intégrité et la bonne réputation. Comment donc satisfaire toutes ces attentes? En mettant en oeuvre un programme d'agrément qui, par son efficacité et son efficacité, se mérite le respect et la confiance de la profession, des institutions d'enseignement et des administrations publiques.

Enfin, rappelons que l'enseignement dentaire a besoin, aujourd'hui, de l'appui de tous ceux et celles qui en ont bénéficié dans le passé.

*Le Dr. Douglas J. Yeo,
Université de Colombie-Britannique*

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See prescribing information on page

Motrin (ibuprofen)

Product Information

Action: Ibuprofen has demonstrated anti-inflammatory, analgesic and antipyretic activity in animal studies designed to specifically demonstrate these effects. Ibuprofen has no demonstrable glucocorticoid effect.

Following a single 200 mg dose of ibuprofen in humans, useful blood levels were demonstrable in 45 minutes and still present in six hours but at barely detectable levels. Peak levels occurred at approximately one hour after ingestion. Levels were lower when taken in conjunction with food.

Ibuprofen is rapidly metabolized and eliminated in the urine. The excretion of ibuprofen is virtually complete 24 hours after the last dose. The serum half-life of ibuprofen is 1.8 to 2 hours. There is no evidence of drug accumulation or enzyme induction.

Ibuprofen has been found to be less likely to cause gastro-intestinal bleeding in doses usually used than is acetylsalicylic acid.

Clinical trials in man have shown activity of a dose of 1200-1800 mg of ibuprofen daily to be similar to that of 3.6 grams of acetylsalicylic acid daily.

Indications and Clinical Uses: Motrin (ibuprofen) is indicated for the treatment of rheumatoid and osteoarthritis. Motrin is also indicated for the relief of mild to moderate pain, accompanied by inflammation, in conditions such as musculo-skeletal trauma and post-dental extraction. Motrin is also indicated for the relief of pain associated with dysmenorrhea.

Contraindications: Ibuprofen should not be used in patients who have previously exhibited hypersensitivity to it, or in individuals with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to acetylsalicylic acid or other nonsteroidal anti-inflammatory agents. (see WARNINGS).

Ibuprofen should not be used during pregnancy, in nursing mothers or in pediatric patients because its safety under these conditions has not been established.

Warnings: Anaphylactoid reactions have occurred in patients with known A.S.A. hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported in patients receiving ibuprofen. Peptic ulceration, perforation, or severe gastrointestinal bleeding can have a fatal outcome, and although few such reports have been received with ibuprofen, a cause and effect relationship has not been established. Ibuprofen should be given under close supervision to patients with a history of upper gastrointestinal tract disease.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in colour vision have been reported. If a patient develops such complaints while receiving ibuprofen, the drug should be discontinued and the patient should have an ophthalmologic examination.

Fluid retention and edema have been reported in association with ibuprofen, therefore, the drug should be used with caution in patients with a history of cardiac decompensation or renal disease.

Ibuprofen, like other nonsteroidal anti-inflammatory agents, can inhibit platelet aggregation but the effect is quantitatively less and of shorter duration than that seen with acetylsalicylic acid. Ibuprofen has been shown to prolong bleeding time (but within the normal range) in normal subjects. Because this prolonged bleeding effect may be exaggerated in patients with underlying hemostatic defects, ibuprofen should be used with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients on ibuprofen should be cautioned to report to their physicians signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

When ibuprofen is added to the treatment program of patients who have been on prolonged corticosteroid therapy, and it is decided to discontinue this therapy, the corticosteroid should be tapered slowly to avoid exacerbation of disease or adrenal insufficiency.

Septic meningitis has been reported in connection with ibuprofen therapy in patients with systemic lupus erythematosus. Such patients may also develop hypersensitivity reactions to ibuprofen such as fever, rash or abnormal liver function more often than those with other disorders. Caution should therefore be exercised when considering ibuprofen therapy for patients with systemic lupus erythematosus.

Drug Interactions

Coumarin-type anticoagulants - Several short-term controlled studies failed to show that ibuprofen significantly affected prothrombin times or a variety of other clotting factors when administered to individuals on coumarin-type anticoagulants. However, because bleeding has been reported when ibuprofen and other nonsteroidal anti-inflammatory agents have been administered to patients on coumarin-type anticoagulants, the physician should be cautious when administering ibuprofen to patients on anticoagulants.

A.S.A.: Animal studies show that A.S.A. given with non-steroidal anti-inflammatory agents including ibuprofen yields a net decrease in anti-inflammatory activity with lowered blood levels of the non-A.S.A. drug. Single dose bioavailability studies in normal volunteers have failed to show an effect of A.S.A. on ibuprofen blood levels. Correlative clinical studies have not been done.

Adverse Reactions: The following adverse reactions have been noted in patients treated with ibuprofen:

Note: Reactions listed below under Causal Relationship Unknown are those which occurred under circumstances where a causal relationship could not be established. However, in these rarely reported events, the possibility of a relationship to ibuprofen cannot be excluded.

Gastrointestinal: The adverse reactions most frequently seen with ibuprofen therapy involve the gastrointestinal system.

Incidence 3 to 9%: nausea, epigastric pain, heartburn

Incidence 1 to 3%: diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the gastrointestinal tract (bloating or flatulence).

Incidence less than 1%: gastric or duodenal ulcer with bleeding and/or perforation, gastrointestinal hemorrhage, melena, hepatitis, jaundice, abnormal liver function (SGOT, serum bilirubin and alkaline phosphatase).

Central Nervous System:

Incidence 3 to 9%: dizziness

Incidence 1 to 3%: headache, nervousness

Incidence less than 1%: depression, insomnia

Causal relationship unknown: paresthesias, hallucinations, dream abnormalities.

Dermatologic:

Incidence 3 to 9%: rash (including maculopapular type)

Incidence 1 to 3%: pruritis

Incidence less than 1%: vesiculobullous eruptions, urticaria, erythema multiforme

Causal relationship unknown: alopecia, Stevens-Johnson syndrome.

Special Senses:

Incidence 1 to 3%: tinnitus

Incidence less than 1%: amblyopia (blurred and/or diminished vision, scotomata and/or changes in colour vision). Any patient with eye complaints during ibuprofen therapy should have an ophthalmological examination (see PRECAUTIONS).

Causal relationship unknown: conjunctivitis, diplopia, optic neuritis.

Metabolic:

Incidence 1 to 3%: decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

Hematologic:

Incidence less than 1%: leukopenia and decreases in hemoglobin and hematocrit

Causal relationship unknown: hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes (e.g. purpura, epistaxis, hematuria, menorrhagia).

Cardiovascular:

Incidence less than 1%: congestive heart failure in patients with marginal cardiac function, elevated blood pressure

Causal relationship unknown: arrhythmias (sinus tachycardia, sinus bradycardia, palpitations).

Allergic:

Incidence less than 1%: anaphylaxis (see CONTRAINDICATIONS).

Causal relationship unknown: fever, serum sickness, lupus erythematosus syndrome.

Endocrine:

Causal relationship unknown: gynecomastia, hypoglycemic reaction.

Renal:

Causal relationship unknown: decreased creatinine clearance, polyuria, azotemia.

Symptoms and Treatment of Overdosage: A nineteen month old child weighing 12 kg ingested from 2800 to 4000 mg and presented with apnea, cyanosis and responded only to painful stimuli. Oxygen and parenteral fluids were given and at 12 hours she appeared completely recovered. Two other children (10 kg each) ingested 1200 mg of ibuprofen each and there were no signs of acute intoxication or late sequelae. A 19 year old male who had ingested 8000 mg of ibuprofen reported dizziness, and nystagmus was noted. He recovered with no reported sequelae after parenteral hydration and three days' bed rest.

In cases of acute overdosage, the stomach should be emptied by vomiting or lavage, though little drug will likely be recovered if more than an hour has elapsed since ingestion. Because the drug is acidic and is excreted in the urine, it is theoretically beneficial to administer alkali and induce diuresis.

Dosage and Administration: Rheumatoid arthritis and osteoarthritis: The initial daily dosage in adults is 1200 mg divided into 3 or 4 equal doses. Depending on the therapeutic response, the dose may be adjusted downward or upward. The daily dosage should not exceed 2400 mg.

Maintenance therapy, once maximum response is obtained, will range from 800 to 1200 mg per day.

Mild to moderate pain associated with inflammation, dysmenorrhea: 400 mg repeated as required every 4 to 6 hours. The daily dosage should not exceed 2400 mg.

Children: Due to the lack of clinical experience, ibuprofen is not indicated for use in children under 12 years of age.

Supplied: 200 mg (yellow), 300 mg (white), 400 mg (orange) sugar-coated tablets and 600 mg (peach) film-coated tablets in bottles of 100 and 1000.

Product monograph available on request.

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Dentist objects to "interference"

The enterprise of Johnson & Johnson has requested and obtained the institution of tariffs on amalgam by the Canadian government.

Enterprise is a word used for those actions of men who undertake an endeavor or produce a product that others may choose to buy if they wish. In the term 'free enterprise' the word 'free' is superfluous: if freedom is absent, enterprise will fade. Witness the state of enterprise in government controlled economies, the prime example being Soviet Russia.

Because of their actions promoting government interventions in amalgam production I am no longer using Johnson & Johnson products. I will discourage others from buying them and I will encourage as many people as I can to take similar action.

Until this firm in fact and by its actions actively discourages government intervention in peoples' lives I will maintain this stand. Dentists have suffered enough of this kind of interference.

To obtain a value for yourself by force of law is an immoral and improper use of force. That is not what force of law is for. It's intended to administer justice to all for the benefit of each of us, not mercy to some at the expense of all of us.

As long as this firm seeks the help of the state, they will not get my support.

Adrian vanHoek
Duncan, B.C.

The Journal of the Canadian Dental Association is pleased to make this space available for "Letters to the Editor". All letters must be signed and the editor reserves the right to edit communications according to space requirements.

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Waterloo to keep fluoridation

Waterloo city voters, by a 313-vote margin, have decided to maintain the 14-year-old practice of adding fluoride to the water supply. The plebiscite showed 6,239 favored fluoridation, while 5,926 voted to discontinue it.

The June vote was forced by a 4,000-signature petition presented to city council by the Waterloo Safe Water Society. The society charged that fluoridation is "mass medication" that it has been linked to cancer, and that it can cause mental retardation.

Big boost given by Academy

But Dr. Gerard Evans, Waterloo region's medical officer of health, told council that stopping the fluoridation program would result in a dramatic increase in tooth decay. Dr. Richard Beyers, a Waterloo dentist, termed the society's claims "considerable nonsense" and "excessive rhetoric."

A big boost to those favoring continuation of fluoridation was given by the Kitchener-Waterloo Academy of Medicine which voted unanimously to present the following statement:

"Our simple message is that the dentists are saying it works to prevent cavities and we, as doctors, are saying, from all the evidence presented, it appears to be safe."

CDA Retirement Savings Plan

Unit values of the Canadian Dental Association's Retirement Savings Plan stood as follows on July 31, 1981.

<i>Common Stock Fund</i>	\$53.9542
<i>Fixed Income Fund</i>	\$22.8150
<i>Guaranteed Fund</i>	\$20.6079
<i>Balanced Fund</i>	\$12.3471

Total assets (market value) of the plan were \$31,792,205.

The previous month's figures, as of June 30, 1981, stood as fol-

lows:

<i>Common Stock Fund</i>	\$55.9843
<i>Fixed Income Fund</i>	\$23.8470
<i>Guaranteed Fund</i>	\$20.3248
<i>Balanced Fund</i>	\$12.9493

Total assets (market value) of the plan were \$33,080,511.

For further information write to: Canadian Dental Service Plans Inc., P.O. Box 7500, Station A, Toronto, Ontario M5K 1A0.

Régime d'épargne-retraite de l'ADC

Les valeurs respectives du Régime d'épargne-retraite de l'Association Dentaire Canadienne étaient les suivantes au 31 juillet 1981.

<i>Fonds d'actions ordinaires</i>	\$53.9542
<i>Fonds à revenu fixe</i>	\$22.8150
<i>Fonds garanti</i>	\$20.6079
<i>Fonds de placement</i>	\$12.3471

L'avoir total (valeur marchande) du régime s'élevait à \$31,792,205.

Au 30 juin 1981, les chiffres du mois précédent étaient les suivants:

<i>Fonds d'actions ordinaires</i>	\$55.9843
<i>Fonds à revenu fixe</i>	\$23.8470
<i>Fonds garanti équilibré</i>	\$12.9493

L'avoir total (valeur marchande) du régime s'élevait à \$33,080,511.

Pour obtenir tout renseignement supplémentaire, prière de s'adresser aux: Régimes des rentes et d'assurances subventionnés par l'ADC, P.O. Box 7500, Station A, Toronto, Ontario M5K 1A0.



Dr. Calvin Torneck and Dr. Arthur Arshawsky, Toronto; Dr. David Prenskey, Mexico City; and Dr. Joel J. Edelson, Toronto, were at a recent international gathering of the 38th annual session of the American Association of Endodontists. The AAE's 1984 annual meeting will be held in Toronto.

Handicapped must become priority and not

INTRODUCTION

The dental profession must become more aware of and responsive to the needs of the disabled in Canada, who make up between one and three per cent of the population. In this article disabled refers to both physically and mentally handicapped persons.

Dr. Norman Levine is a leading authority on dentistry for the disabled and he feels dentists as individuals can help. Miss Audrey King, who is employed at the Ontario Crippled Childrens Centre in Toronto in the Department of Psychology, is a guest lecturer in the Department of Paedodontics, Faculty of Dentistry, University of Toronto.

Dentistry for the handicapped must become a priority, not an afterthought. Dr. Levine says the difficulties of treating the disabled are often caused by the emotional state of mind of the dental practitioner, auxiliaries, affected persons and parents or guardians. This must be overcome.

"The quality of dental care to the handicapped cannot and must not be any different from the care we give to our other patients," he says. "As time passes, our profession will be called on with more regularity to provide dental services for the disabled.

"As far as I'm concerned, it would be best to initiate some collective leadership in looking after these people or otherwise the disabled will be thrust upon us. We can't afford *not* to take up that challenge."

Dr. Levine says in the last 20 years society has changed its attitude toward the disabled. No longer are the majority of handicapped persons isolated in institutions. Indications of this change first appeared after the Second World War, increased with the end of the Korean War, and espe-



Dr. Norman Levine

cially were noted when the young Vietnam veterans, many of them disabled, returned home from southeast Asia.

"But not only has society changed, the disabled have also changed by

banding together in a positive way," he says.

Miss King agrees, saying the change in society has brought about an increase in demands from the handicapped. A polio victim who has spent life in a wheelchair since she was nine, Miss King says the handicapped now realize "what they don't have to do without."

Despite advances in society's attitude, Dr. Levine says there is still much to be done. A professor and chairman of the Department of Paedodontics at the University of Toronto's Faculty of Dentistry, he notes that usually fewer than 10 per cent of first-year dental students in his classes have ever had personal contact with the handicapped.

"If the disabled have been sheltered from society, we have also sheltered society from the disabled," he says.

Through education however, things are improving. Prior to the early '70s undergraduate dental programs dealing with the needs of the handicapped were unheard of, but today many dental schools do address the issue. Dr. Levine predicts that courses on dental care for the handicapped may soon become a mandatory part of the curriculum, if school accreditation is to be achieved.

At Toronto's Mount Sinai Hospital, where he is also head of the section for dentistry for the handicapped, Dr. Levine says he uses the dental clinic with other members of his staff to introduce dental students to handicapped patients and "get them over the emotional hurdle" of treating them. This program is part of the Paedodontic assignment.

It is this very hurdle which both Dr. Levine and Miss King agree is a major problem.

Miss King says dentists must get over their fear that they can't handle

an afterthought for Canadian dentists

handicapped patients. She says if the dentist does have questions, the patient or parent should, when possible, be asked about them, and then they can decide together whether the patient would be better accommodated in a hospital rather than the dentist's office.

"Believe it or not, disability isn't necessarily a tragedy," she points out. "Some people just like themselves fine the way they are and don't wish to be 'normal'.

"But many handicapped people aren't coping as well as they could if a lot of the barriers were removed. There is a problem with lack of confidence which may relate to a lack of opportunities to move within society."

Miss King says that, unfortunately, this difficulty with mobility often turns out to be a self-fulfilling prophecy. Able-bodied people don't think the handicapped can move within society, and because of their lack of self-confidence, the handicapped person won't move.

Physical barriers tend to block the handicapped in many things they attempt to do — from attending schools, churches and cultural or sporting events to receiving something as basic as dental care.

As Dr. Levine puts it: "If you can't get in the door, you can't get treated."

But this too is changing. New professional buildings are now required by law to have no architectural barriers to the disabled, while many older buildings are being redesigned to remove their barriers.

Dr. Levine advises that if dental office doors are widened to 32 inches, they will accommodate most wheelchairs.

Studies have shown that to truly meet the disabled's needs, every dentist in Ontario will have to accept

between 40 and 50 handicapped people as patients. Dr. Levine admits the goal may seem unrealistic, but says this can be achieved through education and exposure.

Dr. Levine says he is opposed to theories advocating the handicapped should be treated at odd hours so as not to disturb other patients.

"Bring the disabled into your office during the hours which suit them," he says. "That way, your staff and other patients will get used to being exposed to them. I'm a firm believer that prejudices are learned, not inherited."

Dr. Levine explains that the more severe the patient's handicap is, the more intensive will be the pre- and post-operative care needed. But he says fewer than 10 per cent of the disabled require general anesthesia and at Mount Sinai, all the dental treatment under general anesthesia is done in the main operating room or the out-patient area.

Dr. Levine also says treatment planning and procedures will vary depending on the individual and the handicapping problem.

"When one realizes that dental care has often been neglected as a result of concerns for the major medical problem, the ideal is neither possible nor warranted.

"Let your conscience be your guide. I still feel every tooth, if possible, should be saved, but in some cases this is just not practical. If you have to, make compromises, but make sure they are good compromises. Don't expect to give the handicapped any more than anyone else, but at the same time, you shouldn't give them any less.

"Emphasis should be placed on good oral hygiene either by the individual or his parent or guardian etc.; this will ensure that whatever treatment is done will be maintained. The high-cost sophisticated procedures

require optimum care and we as practitioners must realize in many individuals this commitment is just not possible."

Dr. Levine says it's important when treating the disabled to remember certain things; for example, no matter how long it may take for a handicapped patient to leave his wheelchair for the dental chair, the patient should be allowed to make the move himself because it will give him dignity and self-confidence.

Also, Dr. Levine advises treatment should not be immediately forced on the patient. Sometimes it has to be done in stages. He says it must be remembered that even some adult patients may only have the mental development of a child.

However, he emphasizes that most dental procedures for the disabled are routine and the same basic principles for good dentistry apply.

Dr. Levine says handicapped children are usually easier to control as patients than adults, if only because of their size. He adds that if prevention starts with the child, it will lead to a good adult patient and a better chance of the dentist producing a healthy mouth.

Dr. Levine says he does not think dentists have been any slower than other professionals in accepting their responsibility to the disabled.

As a part of society, they've gone along with the times," he says. "Even before this change, there were always dentists who felt they could cope with the disabled. But that was through desire. They weren't taught to cope. Now we're teaching dentists how to cope."

A program under way at the University of Toronto that's helping to achieve this is the Mobile Dental Clinic. The Atkinson Charitable Foundation, a non-profit organization, has awarded the dental faculty

In the News

\$284,000 for a mobile van which travels through underserved regions of Ontario and accommodates the dental needs of the handicapped.

As a pilot project, the faculty first borrowed a van from the Ontario Ministry of Health and located it for one year in North Bay and another year in Sudbury. Undergraduate dental students had the opportunity to live on the van for a week and the same chance was extended to hygienists and dental assistants. Dr. Levine says the project was so successful that the faculty undertook to construct its own trailer which at present is stationed in a Northern Ontario community.

Both Dr. Levine and Miss King are optimistic that things will continue to improve for the disabled. But Dr.

Levine says the dental profession cannot bring this about on its own. He says improved integration between members of all the health professions is essential to provide total care for disabled persons. In the past, other health needs were often overlooked because parents and medical professionals were sometimes only concerned with the actual handicap.

Another area which needs further attention is the cost of improving services to the disabled. Many people may think government has done enough financially in recent years, but Dr. Levine says there are hidden rewards to making everyday life more accessible to the handicapped. For every disabled person who is now able to work because of the removal of physical and emotional barriers, there

is one less person on a disability pension.

He also feels something should be done for parents who refuse to put their handicapped children in an institution, even though they may be a great financial burden on them. Dr. Levine says these parents save millions of taxpayers' dollars and perhaps the cost of their children's care should be subsidized.

Miss King says she feels the attention focused on the handicapped during the International Year of Disabled Persons promises better understanding in the future.

"The first step is to establish interest and an awareness of the problem," she says. "You have to work toward change. And that's what we're doing."

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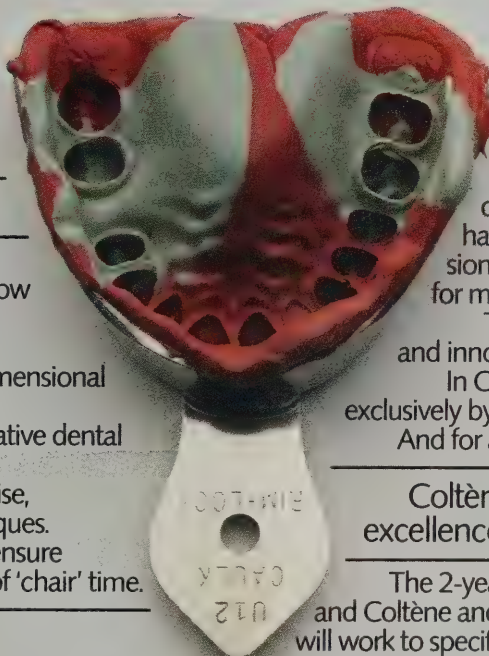
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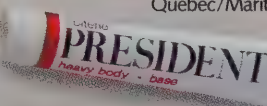
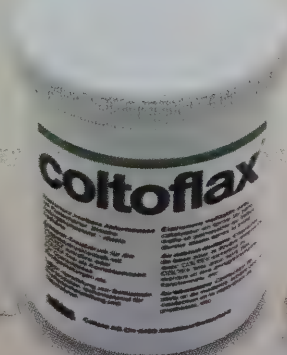
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Excerpts from CDA tariff presentation

The following are excerpts from the transcript of the CDA presentation to the Senate Standing Committee on Banking, Trade and Commerce.

Senator George Isaac Smith: In your discussions, with representatives of the Department of Finance, did you find any reason for this imposition of duty on these formerly tariff-free items?

Dr. Robert Hicks: I have not had the expected discussion with the Department of Finance. In our brief, of which we provided copies, there is an accompanying letter where we ask to have discussions with the Minister of State (Finance) and his department in detail on these particular items. That particular meeting *per se* with myself and the committee has not occurred. I believe our executive director has had discussions with members of the department on it, and perhaps I could paraphrase some of the reasons. One, I believe, was based on the basic issue that we make in the report, and that is that it was the department's intention that duties should always be applied. Therefore, the law should correct what was identified in the appeal heard by the Tariff Board which stated that the law should include dental materials, but the administrative activity of the department was in error and that they were collecting those in error. I believe that the department's position is still that they were not, but the Appeal Board ruled that was not the case.

Senator Smith: Are you suggesting — and I am being critical if you are or are not — that the present provision is to restore the law to what the department thought it ought to be before the Tariff Board overruled them?

Dr. Hicks: I believe that to be the case.

Senator Smith: When was that ruling of the Tariff Board made?

In the News

Dr. Hicks: The appeal was heard in February of 1979. The only other thing I could add for your information — and this is second hand — is that in discussions with the department they had identified one manufacturer which had engaged in production of one formula brand of one dental material, and they felt, in some of their correspondence, that this was a justification. However, dentists use many, many materials. The amendment that is being proposed would place dutiable status on all dental materials being imported into Canada for use in reconstructive surgery.

Senator John Connolly: What kind of money are we talking about here in connection with this duty? Does it increase the cost appreciably to the patient for dental care if this item now becomes dutiable?

Senator John Godfrey: What is the overall effect? Is it in millions of dollars?

Dr. Hicks: Mr. Chairman, this has been difficult to assess, and I have anticipated this question in my attempts to gather information. Statistics Canada, dentists in their practice and every other form of dental trade industry has accepted that to assimilate this material it has been necessary to take specific items — those used in reconstructive dental surgery — out of the general supplies, which would include paper materials, napkins et cetera used in a dental office. So it is a "best guess" response that I am giving you. If we take the numbers that are available, the range we anticipate — because the duty does rise as high as 18 per cent — could well be in the order of \$3 million to \$4 million or even to as much as \$5 million in duty annually on dental materials used for reconstructive surgery. I hope you appreciate that within a dental practice, because of the nature of the profession, most of it is under the reconstructive classification. Therefore, the percentage that has been

taken of supplies is significant.

Senator Smith: What is included in reconstructive surgery?

Dr. Hicks: In the general description of the materials, of which there are many, amalgam or silver-type materials which are commonly known, is the major item. There would also be cements and cavity liners that are used; there are acrylic and what we call composite materials that are used, and these are changing fairly regularly depending on the nature of the chemical composition. Basically, they are the filling materials and the associated materials that go with them together with materials that are used in the formation of prosthetic appliances that go along with reconstructive aspects. This is something that you are creating to put in place, for instance, the gold that would go into a bridge. These are the types of materials that are used in reconstructive surgery.

Senator Smith: What is the reasoning of the department for allowing these items to be duty free if the particular operation on the patient's mouth is performed by a medical practitioner but taxing it if is performed by a dental practitioner?

Dr. Hicks: I have not received that answer.

Senator Smith: You must have wondered though.

Dr. Hicks: Certainly as we go through the brief we ask why, and I have the same question but, unfortunately, I do not have the answer.

Senator Connolly: Is my understanding correct that if a medical doctor imports these materials they come in duty free because he is going to use them, but if they come in to be used by a dentist, then they are dutiable? If that is so, this is an amazing proposition of law.

Dr. Hicks: Mr. Chairman, I have that understanding. That administrative practice of who clears them at the border, I am not sure about, because the tariff item identifies it as to how it is to be used. If it is used in medical reconstructive surgery, then it is tariff free.

Senator Connolly: Could you read us the clause that we are talking to because if that clause does not distinguish between the right of a dentist and the right of a medical doctor, then I should think it would apply to both.

The Chairman (Senator Salter Hayden): Yes I will read it slowly, if you like. It says: Aural, nasal, mastectomy and other medical or surgical prostheses, other than dental prostheses; materials for use in reconstructive surgery, other than dental surgery;

There then follows a further long list. I think the key to what we are concerned with would be in the lines that I have read. It says:

... other medical or surgical prostheses, other than dental prostheses; materials for use in reconstructive surgery, other than dental surgery;

Senator Smith: And this new levy would be at what rate? 14.4 per cent?

Dr. Hicks: The item of amalgam being taken out of tariff item 47810 has now been placed in new tariff item 92858. Under that particular tariff item, at the present time, it has been placed at 14.4.

Senator Smith: So if you calculate the amount of additional cost imposed, you would simply have to put this rate against whatever the cost of the amalgam is, and as the cost of the amalgam goes up, so the total amount goes up.

Dr. Hicks: That is right; but the other point is that that dental amalgam — that example that we used — is only one of the many supplies that are also being tariffed under this particular act.

Senator Godfrey: If you take the top figure of \$5 million, and you have roughly 10,000 dentists — perhaps more — in Canada, according to my arithmetic that is \$500 per dentist.

Dr. Hicks: Again I emphasize that we are not here as dentists concerned about the economics of the dentists' practice, and I pointed out to you that if our submission is successful, there is no benefit; if it fails, there is no hardship. Our representations are based on the general factor of cost of dental fees and the cost to the dental patient compared to what the tariff is designed to give protection to — the company we have identified, or the others. The cost per job creation is very high.

Senator David Walker: In other words, you are doing this as a charitable act to our patients.

The Chairman: No, no.

Senator Walker: Just a minute. You do not want this tariff to be passed on to them. Is that not correct.

Dr. Hicks: Mr. Chairman, honourable senator, that is correct. We mention in the brief that it does not appear to be compatible with general government philosophies, which are concerned about rising health costs. While in some people's minds the actual cost per filling may be small, it does not meet that basic test. If there is a good reason, a valid reason and an equitable reason, then one has to consider that. In our presentation we suggest that there is not the balance and equity that there should be.

Senator Walker: Your own costs, and your own charges, have gone up enormously, have they not? Now you are thinking of Joe Public for the first time being taxed in connection with filling.

Dr. Hicks: Mr. Chairman, honourable senator, no, not the first time. This is the first time the Senate that we have brought up something that is of concern in that area.

Mr. T.S. Gillespie, Adviser to the Committee: Dr. Hicks, could you give us your best estimate of the percentage of the total bill presented to a patient by a dentist that would be represented by the cost of materials?

Dr. Hicks: Mr. Chairman, not on a specific bill, because it would depend upon the procedure used. Perhaps I

could give that to you on a broader basis. Information I was able to obtain from some provincial dental associations that keep these statistics does not agree with the information you received. One particular province gave a fee for annual dental supplies utilized in a dental office as being in the neighbourhood of \$10,000. On a follow up to that, I asked what portion of that would be used in reconstructive dental surgery. I was told that it would be \$8,500.

Mr. Gillespie: You have anticipated my second question, I think, because I was going to refer you to the report of the Ontario Dental Association, which is part of your original submission. At page 21 of the brief you presented to the honourable Pierre Bussières you state:

We have determined that the dental supplies and materials subject to the tariff items in question represents an expenditure of over \$10,500 by the average Ontario Dental Practitioner. If as little as 25 per cent of supplies in this category are those subject to tariff, you have increased the total dental practice cost in Ontario by over \$3 million.

Do I gather from that statement which is quoted from pages 21 and 22 of your first brief, that we can say that the cost of this tariff change, for Ontario patients only, would add up to \$3 million?

Dr. Hicks: Mr. Chairman, the purpose of my second question to the Ontario Dental Association was to ask them to single out items. They used the term "dental supplies", and I asked for the items for reconstructive surgery, which are the items we are talking about in this brief. In looking at this now — and this is why we provided the committee with a formal brief — I think their calculations were done on the tariff being imposed at the retail price. I think my calculations have taken into consideration a "best guess" as to what the mark up is

in the dental industry, which of course is not information readily available. I took what I thought was a reasonable amount.

The Chairman: Which one would be higher?

Dr. Hicks: The Ontario brief. My estimate for Canada is in the neighbourhood of \$3 to \$5 million. I tried to be conservative in my estimate, but that is still a lot of money relative to what the tariff is attempting to do per job. They are saying \$3 million for Ontario alone, and I am suggesting that theirs is a little high.

Senator Connolly: I suppose the value for duty is based on the wholesale price?

Dr. Hicks: That is my assumption.

The Chairman: Of course, as members of the committee are aware, when we get into a situation of this kind there are two issues we have to look at — that is, public interest and the need for revenues by the government. Is this a case where the public interest is best served by permitting what has been going on? Are we to have no duty imposed on these particular materials? The effect of that would be to maintain the cost of those materials at its present level. Of course, other services performed by dentists may go up, as they do, for other reasons. Is the public interest best served in these circumstances by collecting the additional money that would be produced in this situation and putting it into the the federal treasury and let the consumer find his ability to pay it? Perhaps he would find his ability to pay it by postponing the job, and may ultimately end up having the least expensive job done — having his teeth extracted.

Dr. Hicks: Mr. Chairman, from a dentist's point of view, that is probably the most expensive treatment, because usually some form of replacement is necessary and that is usually much more expensive.

Institutional advertising: Testing campaign

The Canadian Dental Association distributed a 15-page status report on dental institutional advertising in North America to the profession November 12, 1980. It was designed to inform dentists across Canada about the meaning of institutional advertising, why it was considered, how it was being tested, who was doing it and what results were forthcoming.

The institutional advertising campaigns investigated in depth were conducted by the American Dental Association and the Academy of General Dentistry.

The Ontario Dental Association now is involved in a test program.

AN UPDATE

The American Dental Association virtually scrapped its national institutional advertising test campaign after its House of Delegates rejected a \$3.75 million network institutional advertising campaign proposed for 1981. The decision was taken last fall during a \$2 million test campaign, in both the print and television media in 1980. ADA did, however, agree to allow continuation of the test marketing of the TV commercials in the test cities through June 1981.

Early test results from the 1980 campaign indicated there was a slight increase in patient awareness, but no actual increase in dental visits in the test cities compared with the control cities. More complete results are expected later in the year.

Research literature explains that while it is generally agreed television can be effective in changing attitudes and beliefs, it is a long-term process, a long-term commitment.

Following rejection of the 1981 institutional advertising campaign, a

nine-member dental Special Communications Co-ordinating Committee was established to investigate the entire marketing approach, supported by the management marketing consulting firm, Management Analysis Centre, headquartered in Boston. The marketing firm consulted all marketing-related levels of the association, including the communications and health education departments.

The purpose of the committee is to develop a long-term comprehensive marketing plan not only for the national association but also to accurately appropriate divisions of responsibility to the national, state and local levels in order to eliminate duplication, provide better internal communications and delineate lines of responsibility.

Consultations with various departments have been going on for some time. A preliminary report has been issued. A final one with specific program recommendations will be submitted to the Communication Co-ordinating Committee which will take specific resolutions to the October meeting of the ADA House of Delegates.

While institutional advertising may form some part of a recommendation, ADA might become the repository for institutional advertising programs produced by individual States and local societies, so they could easily be made available to all. ADA might also be asked to develop individual institutional advertising packages to be made available to States and local societies.

Institutional advertising is continuing in some States. The California Dental Association, for example, has launched a \$6 million, five-year campaign to be financed by a dues increase. However, this program includes a fully integrated communications program similar to the 1979

Sacramento Dental Society program which included: school screenings, pre-school dental health education, a Speakers' bureau, spokesmen placement, media relations, dental office mailings to patients of record, a seminar on patient communication, billboards and paid television commercials.

Incidentally, one of the ADA advertisements has been named one of the year's 100 best television commercials by Advertising Age, an international trade periodical for the advertising and marketing industries.

The Academy of General Dentistry launched an 18-month institutional advertising test program on television in four cities in mid-November financed by a mandatory membership assessment of \$30 per member. Two cities are being used as controls.

The development of the TV project followed what AGD terms the "profession's most definitive market research project investigating public attitudes and behavior relative to the demand for dental care."

Discipline called Belief Dynamics

The research was conducted by D'Arcy-MacManus & Masius, Minneapolis who developed a discipline called Belief Dynamics. (Essentially, Belief Dynamics proposes that all behavior is based on beliefs and that these beliefs trigger action. To alter behavior, you must alter beliefs; to create new behavior you must create new beliefs. Therefore, the job of advertising is to encounter an individual's belief system in such a way that it will lead to the desired new behavior.)

Earlier this year the Ontario Dental Association appointed the Toronto

continuing in Ontario

branch of D'Arcy-MacManus & Masius as their advertising consultants and have exchanged information with the AGD.

Both the Academy and the ODA have identified target audiences.

The Academy's target audience is a category described as the "unmotivated non-user", representing 34,410,000 Americans. Research determined that unmotivated non-users express almost identical beliefs about dentistry as those who fall into the "accepting patients" category. The secondary target audience is "questioning patients" and "negative patients" as research indicated these groups are fence-sitters — that is, those likely to cease seeking dental care unless they receive some positive reinforcement to current behavior patterns.

Target audience "lapsed users"

The Ontario Dental Association's target audience is "lapsed users", defined as persons who have not seen a dentist in the past 12 months. Based on data gathered by Professor Don Lewis of the University of Toronto, 60 per cent of all Ontario adults visit a dentist at least once a year. Only 37 per cent of these people go on a purely voluntary basis. It appears that 16 of the remaining 40 per cent of Ontario's adult population who do not see a dentist on a regular basis have done so in the recent past. It is to this primary target audience of 960,000 men and women that Ontario is directing its campaign.

The Ontario program is two-fold to reach the above 16 per cent and to reassure the 37 per cent who are the voluntary patients that they are making a wise decision by doing so.

In order to gain more information on consumer attitudes and beliefs, the ODA and its agency put together a special research study which interviewed panels of dental users and non-users in Toronto and Cambridge last year.

Peterborough is test site

Ontario's test campaign now is being conducted in Peterborough, from April through September using both television and newspapers. The focus is three-fold: going to the dentist regularly, excuses for not going, and positive reasons for going.

The theme is "See your dentist regularly - if you don't go your teeth will." The one 30-second television commercial is programmed 120 times weekly in four separate flites over the campaign period, many in prime time, with newspaper ads in the weeks between the television flites. The television commercial was earlier pre-tested in a shopping mall, with positive results.

Peterborough dentists, most of whom are participating, have been requested to audit patient traffic, comparing their 1980 and 1981 visits. New patients, that is those who have not visited a dentist in 18 months, have been asked to fill out questionnaires which the dentist mails to ODA. Both the TV commercial and the newspaper ad list a toll-free telephone number suggesting those seeking a dentist call that number.

The results of the campaign will be reported to the November meeting of the ODA Board of Governors and if deemed successful, financing will be required to implement a province-wide campaign.

The Academy of General Dentistry's institutional advertising program

is being conducted in Charlotte, North Carolina and Salt Lake City, Utah at a media cost, which if projected to a national program, would simulate a \$5 million spending level; and in Providence, Rhode Island and Green Bay, Wisconsin at a simulated \$10 million level. The control cities are Columbus, Ohio and Grand Rapids, Michigan.

Each of the commercials was carefully tested prior to airing to assure the intended message was being clearly communicated to the target audience of "unmotivated non-users." Those commercial concepts which failed to meet the creative pre-test process were scrapped.

The television commercials are aimed at convincing non-users of dental services to give up the following beliefs: 1. Going to the dentist isn't worth the time involved; 2. Dental costs are unreasonable; 3. Dental care should be sought only for corrective treatment; 4. I am not susceptible to dental disease and; 5. Going to the dentist will be painful, and I am afraid of that pain.

Thus the program is designed to replace negative beliefs with positive ones.

Monitoring is being carried out through telephone surveys among dentists and consumers in all six markets; a special dentist panel provides for in-office audits of appointment books to determine the number of patient visits in each test market; and questionnaires are being distributed by participating dentists for patients in each test market during the program.

At this mid-way point in the campaign only two of the five research pieces are available, but they indicate some positive changes in the negative attitudes. Final results will be available when the 18-month campaign is completed and has been assessed.

Instruments donated



Michael Ojolic, of Sydney, Cape Breton, accepts a case of dental surgical instruments from Dr. E.S. Morrison, chairman of the Public relations committee of the Nova Scotia Dental Association. The donation of the instruments by Nova Scotia dentists was in response to a request from Dr. Andy Nette, who is now on a two-year CUSO assignment in Botswana, Africa. Mr. Ojolic, a second year student at the Dalhousie School of Dentistry, is working as a volunteer in the dentistry field in Africa for the summer months and will deliver the badly-needed instruments.

Obituaries/Necrologies

BAILLARGEON, Capt. Sylvie, July 7, 1981 as a result of a car accident. Capt. Baillargeon was born Oct. 1, 1956. She enrolled in the Dental Officer Training Plan of the Canadian Armed Forces in 1977 and graduated

from the University of Montreal with her DDS in 1980. She was later posted to CFB St-Jean, Quebec, where she was practising at the time of her death.

FLUORINSE®

(Sodium fluoride oral solution)

COMPOSITION: Contains sodium fluoride in a pleasantly flavoured solution at neutral pH. Contains alcohol (3% by volume).

INDICATIONS: Dental caries prophylactic
PRECAUTIONS: For buccal administration only.

DO NOT SWALLOW

Swallowing of solution may cause nausea. Usage in excess of recommended dosage may cause dental fluorosis.

DIRECTIONS: Swish vigorously in the mouth for approximately 1 to 2 minutes (preferably at bedtime after brushing and flossing teeth thoroughly) 1 to 2 teaspoonfuls (5 to 10 ml) of FLUORINSE.

Expectorate, DO NOT SWALLOW. For maximum benefit, do not eat or drink for a period of 30 minutes after rinsing.

Weekly Rinse	Daily Rinse	Weekly Rinse
Cinnamon (red) 0.2% sodium fluoride	Ice Mint (blue) 0.5% sodium fluoride	Mint (green) 0.2% sodium fluoride

HOW SUPPLIED: Fluorinse is available in 450 ml plastic bottles with child-resistant caps.

CAUTION: Keep out of reach of children.

FLOZENGES®

(Sodium fluoride tablets)

COMPOSITION: Contains sodium fluoride in lozenge form. Contains no sugar, saccharin or cyclamate.

INDICATIONS: Dental caries prophylactic for buccal and systemic administration.

PRECAUTIONS: If this product is used in an area where the drinking water has a natural fluorine content in excess of 0.7 parts of fluoride ion per million parts of water, or is artificially fluoridated, fluorosis of the tooth enamel may result.

CONTRAINDICATIONS: Sodium-free diets

RECOMMENDED DOSAGES SCHEDULE:

Age	Concentration of fluorine in drinking water (p.p.m.)		
	<0.3	0.3-0.7	>0.7
2 weeks to 2 years	0.25 mg daily (½ orange tablet)	0 mg daily	0 mg daily
2 to 3 years	0.5 mg daily (1 orange tablet)	0.25 mg daily (½ orange tablet)	0 mg daily
3 to 16 years	1.00 mg daily (1 strawberry tablet)	0.5 mg daily (½ strawberry tablet)	0 mg daily

After brushing the teeth allow the tablet to dissolve slowly in the mouth and swallow the resultant liquid. Initially, for infants, the tablet can be dissolved in juice or crushed in food. However, once teeth have erupted the infant should be encouraged first to chew and eventually, when older, to suck the tablets as described above.

HOW SUPPLIED: Flozenges are available in plastic child-resistant containers of 120 lozenges.

Two Flavours:

Orange	Strawberry
0.5 mg of fluoride ion	1.0 mg of fluoride ion

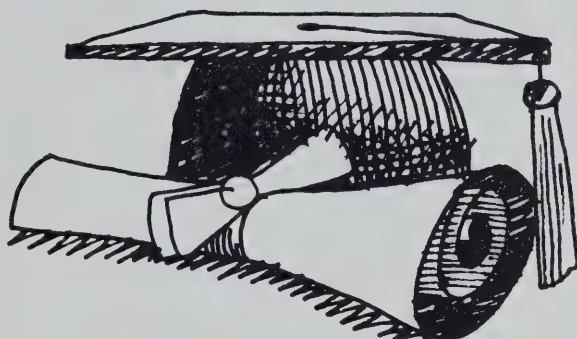
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and prestige of Dentistry

Economic Council examines occupational regulation

At the February, 1978 First Ministers' meeting, the matter of economic regulation at all levels of government was referred to the Economic Council of Canada for recommendations. An interim report was issued one year later, and this final report, *Reforming Regulation*, was released in June, 1981. The following material has been prepared from this report.

"Clearly, occupational regulation in Canada is not working as well as it could, or should. The evidence that we have gathered suggests that a number of regulatory restrictions are imposing costs in excess of the benefits provided. Our analysis suggests that regulatory reform could significantly reduce these costs without sacrificing the principal public benefits of occupational regulation."

This basic conclusion was reached in a recently published study by the Economic Council of Canada, entitled *"Reforming Regulation."*

Dentists were criticized for the restrictive nature of their self-regulation of the profession.

Occupational regulation was only a small part of the broad study which also examined regulation of transportation, telecommunications, agriculture, fisheries, pollution, occupational health and safety, and large and small business.

The study found that the most restrictive form of regulation is licensure, and the costs involved to the public are "significant".

When responding to demands from professional groups for exclusive rights to practise, provincial governments have not been sensitive enough

to the costs which result in restrictions on consumer choice, the study says.

The study also concludes that the least defensible form of regulation is that which limits the freedom of practitioners to set their own price and disseminate information.

Recent revisions to the Combines Investigations Act have relaxed some of these restrictions, but the Act has yet to be tested fully.

"Given the importance of reducing restrictions on advertising and pricing, it is important that developments in this area be closely monitored," the study says.

The Council's study also reprimands governments for their handling of "self-regulation,"

It says while governments can delegate regulatory authority, they must be ultimately responsible for the actions of bodies given such authority. Private bodies must be directly accountable to government for their actions.

Commissions recommended

"If government authority is used in ways that cannot be controlled or that governments are even unaware of, then they in turn cannot properly account to the electorate for its use, and responsible democratic government becomes a sham."

The study group recommends that each province, along with the federal government, set up an Occupational Regulation Commission to co-ordinate occupational regulation within each jurisdiction.

"The Commission would, at the least, assess and advise the government on all existing and proposed legislation concerning regulated occupations; conduct and publish research assessing the performance of

occupational regulation on a systematic basis; and hear appeals initiated by members of the public and of occupations groups, or by potential entrants."

The proposed Commission would assemble all available information on occupational regulation to make informed decision-making easier; streamline the handling of complaints about disciplinary procedures; and have the authority to analyze and evaluate present and proposed regulatory structures, the study says.

It suggests that Commission put emphasis on ensuring that licensing requirements provide "an adequate check on the competence of licensed members... The main justification for licensure derives from the assurance it provides as to the competence of those providing a service. At present, however, all that may be needed to meet this 'competency requirement' is to demonstrate that one has absorbed a body of knowledge at the beginning of one's career."

The proposed Commission would also investigate any further requirements deemed necessary to ensure that members of licensed occupations are providing an adequate level of service.

The study calls for a complete review by governments of existing occupational regulation and legislation to ensure that the least restrictive form of regulation "consistent with the protection of the public interest has been chosen."

The council study group believes conflict of interest between advancements of the socio-economic interests of occupational groups and administration of self-regulation may call for a transfer of regulatory powers back to government.

The group also says, "although regulation of some professions is necessary, this does not imply that

of professions in Canada

the profession itself should do the regulating.”

One of the most costly restrictions is the broad definition of functions to be performed by members of specific licensed occupations.

Not all tasks now performed by the “peak professional” require the same degree of skill or knowledge. In many cases, these tasks can be performed by persons whose training is narrower in terms of occupational functions.

“We believe this is well illustrated by the practice of dentistry and related services.”

The study recommends that governments increase the number of different types of appropriately trained occupational groups that can compete in specific regulated service markets.

Less extensive training and specialization of persons such as denturists or dental mechanics, chiropodists, optometrists and chiropractors could enable them to provide their services at lower costs than an individual licensed to provide all services, the study says.

“Strike down restrictions”

If the possibilities for substituting practitioners for professionals in many areas were taken up, it seems likely that output could be dramatically increased and costs correspondingly reduced. ‘Four-handed’ dentistry is significantly more productive than two; and computerized search procedures and law clerks can both substitute for lawyer time.”

The Council says governments should strike down restrictions imposed by a regulated occupational body on the use of other paraprofessionals who are certified to perform certain duties.

“In our view, no statute or regulation should confer on the members of one regulated occupation the power to regulate another occupation.”

In dealing with licensure, the study points out that although dental hygienists and technicians are licensed and have rights to perform certain tasks that are part of the practice of dentistry, they are not permitted to sell these services to the public. They must sell them to a dentist, who then resells them to his patients.

“Pulling together” helps

the maintenance of high standards and protection of the public. “But it is not at all apparent that such restrictions contribute to higher-quality service, or, if they do, that this contribution is commensurate with the costs arising from such restrictions . . . It has yet to be seen what, if any, demonstration of quality is required beyond the bald assertion of its acceptability to the occupation.”

The Council also criticizes advertising restrictions in terms of price and special competence. The study says a general “pulling together” of some professional groups “helps to maintain the status of the occupation at the expense of consumers wishing to acquire comparative information about the relative merits or costs of individual practitioners or services.”

The study acknowledges that certain controls are necessary to ensure competence and quality control, but says it is questionable whether limitations on the setting of prices, advertising, and organization of a practice are required.

“Occupational regulations can limit innovation by preventing members from experimenting with new forms of delivering their service.”

The Council calls for examining of some licensing restrictions which are not necessary for the protection of consumers.

The study found that in cases where fee-setting was enforced, professional incomes were increased by 11.8 per cent. Advertising restrictions contributed 10.8 per cent to the earnings of the average practitioner.

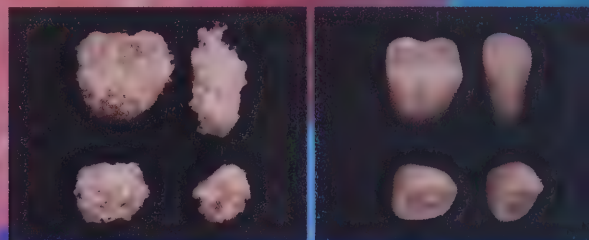
“We are concerned with such restrictions, not because they can lead to higher incomes for certain groups in society — though many would find this method of redistribution highly objectionable — but because they contribute to waste and inefficiency. The effect of these restrictions is to deprive a very important segment of the economy of much of the competitive pressure that, in other industries, has been a major spur to the introduction of cost-reducing initiatives.”

The final two recommendations in the study call governments to increase the number of different types of trained occupational groups that may compete in particular regulated service markets, and to prohibit unnecessary restrictions on practitioners’ freedom to set their own prices and disseminate information.

“While regulation is necessary and desirable to protect consumers in the provision of occupational services, the overwhelming impression that emerges from the work in this area is that there is considerable scope to make regulation both more effective and less costly.”

Many of the questions raised above were answered in the September, 1980 issue of the Journal. Future articles will provide further information.

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Hypnosis not a new discovery, but useful treatment

"Look into my eyes."

Some dental patients are finding this command a lot easier to heed than the old standard request "open your mouth."

For those terrified of the sound of the drill, the sight of the chair, the very smell of a dental office — hypnosis can mean the difference between a healthy mouth and never seeing a dentist at all.

For the dentist who suffers from the strain of constantly dealing with anxious, overwrought, sometimes hysterical patients, hypnosis is a real alternative to nitrous oxide.

The use of hypnosis on patients is far from a new discovery for the medical profession. Its history is as ancient as that of sorcery and magic. But its use as a scientific technique only began in the latter half of the 18th century.

A Viennese physician, Franz A. Mesmer, first used it in the treatment of psychiatric patients. However, Dr. Mesmer was soon discredited because of his belief that hypnosis was an occult force. Yet despite this setback, "mesmerism", as it was named after him, still continued to interest medical men and it was used extensively.

Great advances have been made

It wasn't until the middle of the 19th century when an English physician was studying the technique that it achieved any real recognition. James Braid realized its psychological nature and coined the terms "hypnotism" and "hypnosis".

Since then, many scientifically trained men and women have studied the psychological state of hypnotism. Great advances have been made in

freeing the technique from superstitions, fears and taboos, particularly since the Second World War.

Today hypnosis is an accepted technique that benefits many if practised by reputable, trained hypnotists. The American Society of Clinical Hypnotists, which is formed exclusively of general practitioners, psychiatrists, psychologists, dentists and those who have a doctoral degree or are in a doctoral program, has 4,200 members around the world. The society, with its head office in Illinois, distributes a quarterly journal, sponsors workshops, and an annual scientific meeting.

Increased publicity

The respectability which now surrounds a technique that was once exploited by charlatans and quacks can be reassuring to a patient. Increased media publicity in recent months has also sparked new interest in hypnosis in the dental office. Airline magazines, newspapers and even the CBC on its program, The Medicine Show, are all taking another look at hypnotism and how it can be used for painless dentistry.

Dr. Ralph Yorsh, a Vancouver dentist, is one person who does not have to be sold on the benefits of hypnosis. He not only uses it on every single patient who is referred to his private practice, but also teaches it to third-year dentistry students at the University of British Columbia.

"As far as I know, UBC is the only university in the world which teaches hypnosis," Dr. Yorsh says. "I don't get much of the students' time — only about six hours — but it's enough to cover the groundwork and we encour-

age students to become more actively involved in hypnotism after they graduate."

Nitrous oxide without chemicals

For Dr. Yorsh, hypnosis is nitrous oxide without the chemicals. He says he became interested in the technique for a "purely selfish motive — relaxed, happy patients means a relaxed, happy dentist."

The Vancouver dentist took his first course in hypnosis from a Portland, Oregon general practitioner in 1959. Gradually he began to take more courses in the subject and has been using it ever since. As a Fellow of the American Society of Clinical Hypnotists, Dr. Yorsh has also taught the technique at society workshops.

Dr. Yorsh uses hypnotism to control patient pain and anxiety. He employs the eye fixation method by telling his patients to concentrate their vision on one area, usually his thumbnail, and then he talks to them in a steady, quiet voice. He says primary induction for a patient takes about three minutes.

Dr. Yorsh emphasizes that his patients are conscious of what is happening at all times.

"No disadvantages to hypnosis"

"What hypnosis does is change their interpretation of the stimulus," he explains. "In their relaxed state, the patients still know they're getting an injection, but it doesn't bother them."

He says as long as the hypnotist has been trained in the technique, there are no disadvantages to hypnosis. However, he advises his colleagues to stay away from such things as age regressions, where a hypnotized patient is taken back in time to his first negative dental experience, unless they have received special training.

"That can open a whole can of worms and who wants to do that?" he asks.

"More sympathetic to patients fears"

Dr. Yorsh estimates that only about one of every 10 dentists who have had training in hypnotism ever use the technique. But he says the mere fact that dentists have been exposed to hypnosis often causes them to change their style and be more sympathetic to their patients' fears.

Dr. Maurice Bygrave, a Toronto dentist, agrees with him. He says many dentists use the suggestions involved with hypnosis without actually labelling them as such.

"If you're a good dentist, you reassure your patient as a matter of course," he says. "Hypnotism just takes it one step further."

Dr. Bygrave recently received widespread media attention on his use of hypnosis after a newspaper story was picked up by the Canadian Press wire service and distributed to newspapers across Ontario. Yet, unlike Dr. Yorsh, Dr. Bygrave says he sometimes goes for months without using the technique.

"It depends on the patient," he says. "I use it as a means of allaying apprehension and removing fears caused by negative dental experi-

ences that have occurred in the past. It's possible that I could use hypnosis four times a week if I was treating that many fearful patients."

Talking calmly reduces stress

Dr. Bygrave attended his first workshop on hypnosis in 1968 at the American Dental Association's Annual Winter Clinic in Chicago. He says his use of the technique varied through the years as he became more experienced. He now finds it is not always necessary to formally induce a patient in order to reduce his fears. Often, simply talking to a patient calmly and sympathetically is enough.

Dr. Bygrave says the success of hypnosis depends on the patient's acceptance of it.

"You must first get over the patient's misconception of hypnosis," he says. "You must overcome the fear of opening up closets with skeletons. There has to be an understanding between doctor and patient. The patient must feel comfortable and know you will not invade his privacy."

"Only for relaxation"

"I myself don't get involved in that type of process. I leave it to the psychiatrist or general practitioner. I use hypnosis only for relaxation."

Dr. Bygrave says he also teaches his patients hypnotic techniques so they can learn to relax in other situations which they may find stressful outside the dental office.

"I believe meditation is a direct link to hypnosis," he says, "Being in

tune with one's subconscious and getting away from one's critical conscious mind is something we all do sometimes without ever knowing it."

Dr. Jerry Litman, of Winnipeg, was recently featured on the television program, *The Medicine Show*, as part of an investigation into the use of hypnosis in the medical sciences. Dr. Litman has been involved with the technique for about 15 years and like Dr. Bygrave, he says formal induction is not always called for.

"Most techniques require the eye fixation method," he says. "But sometimes all that's necessary is talking to the patients."

Rarely used for children

Dr. Litman says he uses hypnosis only on selective patients and rarely on children. He adds that his patients who accept the technique are usually pleasantly surprised at the resulting painless treatment of their dental work.

Dr. Litman says he can't explain the recent resurgence of interest in hypnosis, but believes the use of the technique in the dental office will become even more popular as time goes on.

Both patients and dentists have a stake in painless dentistry. Fear plays a major role in keeping 50 per cent of the population away from the dental office. Constantly facing this fear drives many dentists to depression.

Some dentists view hypnosis as a solution. As Dr. Bygrave says, "Hypnosis is bound to become a regular part of dental school curricula. It's a tool for patient management. We need that tool. We need sensitivity in this day and age."

Description and Documentation of the Private Practice Dental Delivery System

*U.S. Department of Health and
Human Services
Public Health Service
Health Resources Administration
147 pages*

Overall this text is interesting as it describes the private practice dental delivery system as one of the nineteen dental delivery systems now operating in the United States.

The documentation is extensive and points out that there are many factors affecting the growth of the private practice dental delivery system.

All dentists whether a general practitioner or a specialist can easily compare his/her profile of practice to the statistical review presented, as well as, compare how his/her patients process through the office in relation to the many system flowcharts of private practice which have been developed as a result of this study.

Although one can deduce that there will be a great many changes in the future it is important to say that if one wishes to perform work in keeping with high professional standards and provide more comprehensive care, then the private practice dental delivery system as described in this text is the system to achieve these goals.

This text reports a study conducted from September 30, 1977 through September 30, 1980 which attempts to describe private dental practice in the United States today. The system description and documentation were prepared by the Health Systems Division of Systemedics, Inc. in conjunction with the Tufts University School of Dental Medicine and American Medical International. The study was conducted under the guidance and direction of the Institutional Development Branch, Division of Dentistry, Bureau of Health Professionals.

The private practice dental delivery system (PPDDS) is defined as a system which "delivers dental services within a dentist-owned, for-profit organization licensed by a State for the specific purpose of providing dental services (solo, group, specialty, or general practice; fee-for-service, capitation or prepayment)."

In Chapter I the objectives and methodology of the study are clearly delineated.

One of the major tasks was the development of a flowchart depicting a typical patient's progress through the practice from entry to recall.

The flowcharts tracing a patient's process through the system detail: Practice Contract (Start), Immediate Care, Answering Service, Recorded Message, Appointment Scheduling, Registration, Authorization Procedure, Treatment, Treatment Plan, Diagnostic Testing, Payment, Third-Party Reimbursement and Recall Routine.

In Chapter II a general history of the profession pinpoints the major events that have shaped the system. It focuses on changes presently occurring within the system and sets them within a historical context. Current major issues include the use of auxiliary personnel, the increase in group practices, the advantage of third party payments, the influence of the Federal Trade Commission and the emphasis on quality assurance in dental care. It appears that some solutions to problems of accessibility, quality of care, and efficiency in practice are developing within the context of the private practice delivery system. The PPDDS has developed in response to needs vocalized by the public and has shown itself to be responsive to those segments of the population which will utilize its services.

In Chapter III the PPDDS is broken down into five system components — input (examines the resources which are utilized by the system, primarily patients, providers, auxiliaries, supplies, equipment and capital); processing (specifies patient-oriented activities); output (notes the circumstances for the conclusion of patient involvement); feedback; and controls; and two system factors — constraints and environment.

This overview basically defines the major interactions in the system and presents general data and facts on the PPDDS as it exist today.

Chapter IV deals with six major system characteristics: organization, funding, services, effectiveness, efficiency and quality assurance.

Chapter V concentrates on the actual day-to-day operations and procedures that are commonly observed in the system: access, costs, education, enrollment, environment, evaluation, facilities, financing, personnel resources, marketing, mode of delivery, prevention, record systems, treatment, types of services and utilization.

Chapter VI concludes that the private practice dental delivery system has features which differentiate it from other dental delivery systems and are strong determinants in its functioning. These attributes include the following:

- * It is composed of autonomous, individualistic practices
- * It is dominated by solo general practitioners;
- * The owning dentist is responsible for all clinical and organizational decisions;
- * It is a self supporting, entrepreneurial venture with financial risks involved.
- * The system is open-ended, usually accepting any patient who chooses to enter it.

- * The system attempts to maintain a long-lasting patient-doctor relationship for ongoing maintenance care; and
- * The system appears to adapt to meet the needs and requests of the patients it services.

This review was prepared by Dr. Clyde Covit, Montreal, Quebec.

Stanley F. Malamed

Handbook of Local Anaesthesia

The C.V. Mosby Co., St. Louis, Missouri, 1980, Price: \$23.00, Length: 249 Pages

This edition is described as a handbook, and, indeed, the content and layout are easily compatible with the connotation of handbook. It is printed with a soft-cover format and some of the charts and summaries may be useful as a ready-reference.

This book is divided into four parts:

- "The Drugs"
- "The Armamentarium"
- "Techniques of Regional Anaesthesia in Dentistry"
- "Complications and Questions"

The section on drugs contains a good summary of the latest information on the current drugs used in dental local anaesthesia. Drugs no longer in general use are not included whereas an effort has been made to include the newest agents. Someone requiring an in-depth study would need to look elsewhere for more complete information, but a practical compilation of the pertinent factors rel-

ative to the practicing clinician is included.

The section on armamentarium describes the various items of equipment and materials that are required for the administration of local anaesthesia. Also noted are the varieties of each item (e.g. syringes, needles, etc.) that are available. Descriptions are given for proper usage, along with the advantages and disadvantages of each, including appropriate precautions. Photographs have been used effectively for demonstration and they compliment the text. The reader is continually cautioned of potential pitfalls and the approach is generally realistic with regard to short-cuts and the potentially resultant complications.

One area of contention lies with aseptisizing the tissues prior to infection. Dr. Malamed promotes the use of topical antiseptics such as Betadine® (Povidone-iodine), while stating that wiping the intended injection site with gauze is not as effective. How effective can these topical antiseptics be for the 15 to 30 seconds of contact time that the book recommends? He also mentions potential patient sensitivity to the topical antiseptic. What about the potential for the needle tip to carry these agents submucosally? Dr. Malamed indicates that less than eight per cent of dentists routinely use topical antiseptics, yet, he mentions later in the book that the incidence of post-injection infection is extremely rare. Perhaps, a further clarification is required in this area.

The section on technique begins with a chapter on preparation of the patient. A review of the patient's medical history is stressed. Medical conditions of significance are discussed as is the significance of the patient's response to common questions. A general approach is described for atraumatic injectin technique which is a prac-

tical and valuable addition. Dentists, who use local anaesthetics so frequently, often tend to ignore the discomfort of the injection itself. The approach described may, indeed, keep the discomfort of the injection to a minimum. It is noteworthy that aseptic technique falls short in the otherwise excellent photographs of demonstration which show the patient without sanitary bib and the operator without clinic attire.

The following chapter is on anatomical consideration. It covers the basics of anatomy necessary for the clinician learning effective use of local anaesthesia in the oral region. The subsequent chapters describe, in detail, commonly used techniques of local anaesthesia. In addition, the Gow-Gates techniques for mandibular anaesthesia is described. It is a variation of the more commonly employed technique which apparently has fewer complications and a higher success rate. The text is well organized and includes: indications, contraindications, advantages, disadvantages, alternatives, complications, and reasons for failure. Again, photographs and diagrams are used effectively. This section ends with a chapter on local anaesthetic considerations in dental specialties. Although brief, it does address the common problems in the use local anaesthesia associated with various dental specialties. The reasons for these problems are discussed and modifications to improve the practitioner's success rate are given.

Part four covers the topic of complications with a chapter on local complications and a chapter on systemic complications. Charts, diagrams, and photographs augment the text which provides a good overview of the understanding, prevention, and management of the potential com-

plications that are related to the use of local anaesthesia in the dental office. Fainting might be considered an inappropriate omission from this chapter. Although fainting may not be directly related to the local anaesthetic, it is one of the more commonly observed reactions and it could have been included. The book ends with a novel chapter in which common questions are answered. Most answers contain information that may be found elsewhere in the text.

In summary, this book has been written in an easy-to read style that covers the topic effectively in a well organized format. The text is laid out in two columns per page for further ease of reading. The treatment of the topic and the level of understanding are appropriate to one who is learning the use of local anaesthesia. This is complimented by the handbook form to make the book suited to the dental student or clinician who desires a current review of the field of local anaesthesia in dentistry.

This text was reviewed by Dr. Alan S. Ross, Associate Professor and Head, Dept. of Oral Surgery, University of Saskatchewan.

Bell, Proffit, White

Surgical Correction of Dentofacial Deformities

There are very few books in dental literature which can be called "Bible of Such and Such"; *Surgical Correction of Dentofacial Deformities* by Bell, Proffit, and White (W.B. Saunders, pub-

lisher) is such a book. There has not been one book compiled which has so much material in it regarding orthognathic surgery.

This book is in two volumes and has four sections each consisting of a number of chapters. The first section deals with the evaluation of a patient for orthognathic surgery. It deals with the analysis, diagnosis and treatment planning along with development of deformities and malformation syndromes. Four chapters cover treatment planning which is very essential for treating these types of deformities. These chapters cover psychological evaluation of the patient and thoroughly cover analysis of the data base — esthetics, dental alignment, transverse problems, sagittal problems, and vertical problems. Based on this data, treatment plan is covered very well in the text chapter. Many examples are cited to give solutions to the dentofacial deformity problems. This chapter discusses in detail the prediction tracings in cephalometrics, along with soft tissue predictions. Use of different types of articulators for model surgery are also discussed. Pre-operative, operative and post-operative care of the patient is dealt with in the next chapter including presurgical evaluation (normotensive and hypotensive).

Section II has several chapters dealing with clinical assessment and treatment of different deformities. These include maxillary excess, maxillary and midface deformity, mandibular deficiency, mandibular excess, open bite and bimaxillary protrusion. For these clinical situations, deformities are described in detail followed by orthodontic approach and then surgical approach. These clinical deformities are discussed along with a number of case report examples. Techniques of different

surgical procedures are very well documented by good, descriptive diagrams with fine detail. Wherever appropriate, clinical procedures are backed with research papers. All different types of surgical techniques are described and they are up-to-date. Complications from these techniques are also covered very well throughout the book.

Section III has eight chapters on special considerations like nasal deformities, residual alveolar and palatal clefts, hemifacial microsomia, bone grafting, and maxillary asymmetry. The chapter on management of soft tissue problems, though not extensive, tries to deal with them. This is the only deficient section of this book. This section also deals with Prosthetic patient deformities. Edentulous patients and their problems are very well documented. Dr. Bell covers all aspects of edentulous ridge problems; descriptive and up-to-date. Case reports follow the description of these techniques. Bone graft procedures are described with their rationale, types and host sites.

The last section (IV) is titled "New Horizons" and deals with neuromuscular aspects, computer based research studies in deformities and other regulatory mechanisms related to dentofacial deformities.

As a whole, this book will presently be considered as the most advanced reference book for an oral and maxillofacial surgeon. Every oral surgeon must have this "Bible of Dentofacial Deformities" for every day use and reference. It is a whole lot of book — expensive but worth every penny.

This book review was prepared by, Dr. B.K. Arora, Chairman, Oral and Maxillofacial Surgery, University of Alberta.



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Les dentistes peuvent aider les handicapés

INTRODUCTION

La profession dentaire doit se sensibiliser davantage aux besoins des personnes handicapées, qui représentent de un à trois pour cent de la population canadienne, et mieux se préparer à les satisfaire. Par handicapés, l'article qui suit comprend les personnes atteintes d'une incapacité physique ou mentale.

Le Dr Norman Levine est une autorité reconnue dans l'exercice de la médecine dentaire auprès des handicapés; il croit que les dentistes peuvent leur apporter une aide personnelle. M^{lle} Audrey King, employée au département de psychologie de l'Ontario Crippled Children Centre, à Toronto, est chargée de cours au département de pédiodontologie à la Faculté de dentisterie de l'Université de Toronto.

La pratique de la médecine dentaire auprès des handicapés doit devenir une question prioritaire, et pas le résultat d'une réflexion après coup. Selon le Dr. Levine, les difficultés que comportent les soins aux handicapés sont souvent attribuables à l'émotivité des dentistes, des auxiliaires, des personnes handicapées elles-mêmes ainsi que de leurs parents ou gardiens. Il faut surmonter cette émotivité.

“La qualité des soins dentaires aux handicapés ne peut ni ne doit être différente des soins que nous donnons aux autres patients, dit-il. Avec le temps, la profession sera appelée à leur prodiguer ses soins de façon plus continue.

À mon avis, il serait préférable d'entreprendre une action collective pour ce groupe de patients et manifester ainsi notre leadership, avant qu'ils ne nous soient confiés de force. Nous ne pouvons pas nous permettre de ne pas relever le défi.”

Le Dr Levine note que la société a, au cours des 20 dernières années, changé d'attitude envers les personnes handicapées qui ne sont plus, pour la plupart, isolées dans des institutions. Ce changement s'est d'abord manifesté après la Deuxième guerre mondiale, il s'est accru à la fin de la guerre de Corée et il a pris toute son ampleur lorsque les jeunes vétérans du Vietnam, parmi lesquels beaucoup ont été frappés d'une incapacité, sont rentrés du sud-est asiatique.

“Il n'y a pas que la société qui a changé, dit-il. Les handicapés eux-mêmes ont changé en se regroupant de façon positive.”

M^{lle} King abonde dans le même sens, ajoutant que le changement d'attitude dans la société a incité les handicapés à être plus exigeants. Elle-même victime de lapolio et se promenant en fauteuil roulant depuis l'âge de neuf ans, elle précise que les handicapés prennent maintenant conscience des “choses dont ils n'ont pas à se passer”.

Beaucoup à faire malgré le progrès

Malgré le progrès noté dans la société, le Dr Levine soutient qu'il reste encore beaucoup à faire. Professeur et président du département de pédiodontologie à la Faculté de dentisterie de l'Université de Toronto, il note qu'ordinairement moins de 10 pour cent de ses étudiants de première année ont eu des rapports avec les personnes handicapées.

“Si les handicapés ont été tenus à l'abri de la société, nous avons aussi éloigné la société des handicapés”, dit-il.

A force d'éducation, cependant, la situation s'améliore. Alors qu'il n'en était pas question avant le début des

années 70, plusieurs écoles dentaires traitent aujourd'hui des besoins des handicapés dans leurs programmes d'études universitaires. Le Dr. Levine prévoit que bientôt ces institutions devront inclure dans leurs programmes des cours sur les soins dentaires aux handicapés pour obtenir l'agrément.

A l'hôpital Mount Sinai, de Toronto, dont il dirige le service des soins dentaires aux handicapés, le Dr Levine et son personnel se servent de la clinique pour initier les étudiants et les aider à franchir la barrière de l'émotivité. Ce stage fait partie de la formation en pédiodontologie.

Comme le Dr. Levine, M^{lle} King soutient que cette barrière est le principal obstacle à franchir.

Elle précise que les dentistes doivent surmonter la peur de ne pas bien soigner les personnes handicapées. S'il a des questions à poser, le dentiste devrait, dans la mesure du possible, s'adresser au patient ou à ses parents de façon à décider ensemble s'il est préférable de faire soigner le patient à l'hôpital plutôt qu'à son cabinet.

“Croyez-le ou non, l'incapacité n'est pas obligatoirement un drame, de dire M^{lle} King. Certaines personnes se trouvent bien dans leur état et ne désirent pas devenir ‘normales’.

“Plusieurs handicapés ne se débrouilleraient pas aussi bien, si on éliminait d'un coup trop de barrières sociales. C'est une question de confiance en soi, dont le manque est associé au manque d'occasions d'évoluer dans la société.”

Selon M^{lle} King, ce manque de mobilité est souvent empreint de fatalisme. Les personnes bien portantes ne croient pas que la personne handicapée puisse évoluer dans la société et celle-ci ne le fait pas, par manque de confiance en soi.

Les barrières physiques ne sont pas sans gêner les handicapés de bien des

façons, qu'ils veuillent aller à l'école ou à l'église, participer à des événements culturels ou sportifs, ou encore recevoir des soins aussi essentiels que les soins dentaires.

Comme le dit le Dr Levine: "Si vous ne pouvez pas vous présenter, vous ne recevrez pas de soins".

Cela change aussi. Les nouveaux édifices professionnels ne doivent, en vertu de la loi, présenter aucun obstacle architectural pour les handicapés, alors que beaucoup de vieux édifices sont renovés pour éliminer ces obstacles.

Le Dr. Levine suggère qu'en élargissant à 32 pounces les portes du cabinet du dentiste, on pourra y faire passer la plupart des fauteuils roulants.

Selon certaines études, pour vraiment répondre à leurs besoins, les dentistes de l'Ontario devront accueillir de 40 à 50 patients handicapés chacun. Le Dr Levine reconnaît que cet objectif semble irréaliste, mais il ajoute qu'on peut l'atteindre à force d'éducation et d'habitude.

Le Dr Levine n'est d'avis qu'on doive soigner les handicapés en dehors des heures normales de bureau pour ne pas déranger les autres patients.

"Accueillez les handicapés au moment où cela leur convient, dit-il. Ainsi, votre personnel et vos autres patients s'y habitueront. Je crois fermement que les préjugés ne sont pas héréditaires, mais qu'ils se transmettent."

Le Dr Levine explique que plus le handicap du patient est grave, plus les soins préopératoires et postopératoires seront intensifs. Il ajoute cependant que moins de 10 pour cent des patients handicapés ont besoin d'anesthésie générale et qu'à Mount Sinai, les traitements dentaires qui demandent de tels soins se font dans

la salle d'opération ou dans la section des patients externes.

Le Dr Levine indique aussi que le choix du traitement et de la procédure variera selon le patient et la nature de son handicap.

Si l'on pense que le manque de soins dentaires est souvent attribuable aux soucis causés par le principal problème médical, le meilleur des traitements n'est ni possible ni justifiable.

Suivez votre conscience. Je pense toujours qu'il faut sauver chaque dent dans la mesure du possible, mais, pour certains cas, ce n'est tout simplement pas faisable. S'il le faut, faites des compromis, mais assurez-vous qu'ils soient bons. Ne vous attendez pas à faire plus pour les handicapés que pour les autres, mais en même temps n'en faites pas moins.

Insister sur l'hygiène buccale

"Il faut surtout insister sur la pratique d'une bonne hygiène buccale, par la personne concernée, ses parents ou son gardien, et le reste; ceci assurera la durée du traitement quel qu'il soit. Les traitements élaborés et dispendieux demandent le soins les meilleurs et, en tant que praticiens, nous devons comprendre que beaucoup de personnes ne peuvent simplement pas s'y engager."

Lorsqu'on soigne les handicapés, il importe, selon le Dr Levine, de se rappeler certaines choses: à titre d'exemple, quel que soit le temps qu'il prend pour passer de son fauteuil roulant à celui du dentiste, il faut laisser le patient le faire lui-même car, pour lui, c'est une question de dignité et de confiance en soi.

Le Dr Levine note aussi qu'il ne faut pas imposer le traitement au patient. Il faut, parfois, y aller par

étapes. Il faut également se rappeler que certains patients adultes peuvent avoir encore l'âge mental d'un enfant.

Il souligne cependant que, la plupart de temps, les handicapés ont besoin d'un traitement de routine, mais que les principes élémentaires d'une bonne pratique dentaire s'appliquent.

Les enfants handicapés sont ordinairement plus faciles à contrôler que les patients adultes, ne serait-ce qu'à cause de leur taille. Le Dr. Levine ajoute cependant qu'en appliquant un traitement préventif à l'enfant, on en fera un bon patient quand il deviendra adulte et le dentiste aura plus de chance de lui garder la bouche en santé.

Le Dr. Levine ne croit pas que les dentistes ont été plus lents que les autres professionnels à accepter leurs responsabilités envers les personnes handicapées.

"En tant qu'élément de la société, ils évoluent avec le temps, dit-il. Même avant les changements, il y a toujours eu des dentistes qui croyaient pouvoir s'occuper des handicapés. Du moins, ils en avaient le désir, mais on ne leur a pas montré comment faire. Aujourd'hui, nous le leur apprenons."

En ce sens, l'Université de Toronto a mis sur pied une clinique mobile qui visite les régions de l'Ontario qui manquent de services, et veille aux soins dentaires des handicapés. Le véhicule a été équipé grâce à une participation de 284 000 \$ versée par l'Atkinson Charitable Foundation, un organisme à but non lucratif.

La faculté avait commencé par un projet pilote, en empruntant du Ministère de la santé de l'Ontario une camionnette qu'elle a stationnée pendant un an à North Bay puis, l'année suivante, à Sudbury. Les étudiants en médecine dentaire y ont été affectés à tour de rôle pendant une semaine, de

même que les hygiénistes et les assistants dentaires. Le Dr Levine ajoute que la réussite du projet a été telle que la faculté a décidé d'équiper sa propre caravane qui est actuellement installée dans une localité dans une localité du nord de l'Ontario.

Concier les efforts des professions

Le Dr Levine et Mlle King ont confiance que la situation des personnes handicapées continuera de s'améliorer. Le Dr Levine ajoute cependant que la profession dentaire ne peut agir seule. Il souligne qu'il faut absolument concier les efforts de tous les professions de la santé

pour offrir des soins complets aux handicapés. Dans le passé, on a souvent négligé les autres soins, parce que les parents et les médecins étaient trop préoccupés par le handicap lui-même du patient.

Un autre sujet doit également retenir l'attention. C'est le coût qu'il faut encourir pour améliorer le service des handicapés. Beaucoup croient que la participation financière des gouvernements a été suffisante au cours des dernières années. Le Dr Levine note cependant qu'en aidant les handicapés à intégrer plus facilement à la vie quotidienne, la société en retire des avantages cachés. Chaque handicapé maintenant capable de travailler parce qu'on a éliminé les barrières physiques ou émotives diminue d'autant le nombre des personnes

à recevoir des prestations d'invalidité.

Le Dr Levine croit aussi qu'il faut aider les parents qui refusent de placer enfants handicapés dans une institution, même si cela leur impose une lourde charge financière. Ces parents épargnent des millions de dollars aux contribuables et il conviendrait de leur verser de subventions pour couvrir les frais qu'il encourrent.

Mlle King conclut qu'à son avis, en portant le problème des handicapés à l'attention de tous, l'Année internationale des handicapés présage une meilleure compréhension pour l'avenir.

"En premier lieu, il faut éveiller l'intérêt et faire prendre conscience du problème, dit-elle. Puis, il faut provoquer le changement et c'est ce que nous faisons."

soulagement temporaire

insertion initiale

corrections subséquentes



des malaise "d'ajustement" des dentiers

Entre l'insertion initiale du dentier et les corrections subséquentes, même les prothèses les mieux ajustées peuvent causer des douleurs et irriter les gencives. Orajel/d peut soulager ces malaises désagréables.

Vous connaissez le puissant effet analgésique local de la benzocaïne à 7,5% (l'ingrédient principal d'Orajel/d). Mais, peut-être, n'en connaissez-vous pas l'unique base émoulliente, qui adhère à la région affectée, grâce à ses propriétés calmantes et adhésives. Il se peut, quoique rarement, que la benzocaïne et d'autres analgésiques locaux entraînent une sensibilisation des tissus au point qu'il faille cesser de les appliquer.

Donc, après la première insertion des dentiers recommandez Orajel/d pour apporter un apaisement rapide et durable de l'irritation.

orajel/d

Pour un apaisement rapide et durable des irritations.

La réglementation des professions

"Il ne fait nul doute que la réglementation professionnelle au Canada ne produit pas les résultats qu'on pourrait ou devrait en attendre. Les études que nous avons réalisées portent à croire qu'un certain nombre de restrictions imposées par voie de réglementation comportent des coûts supérieurs aux avantages qu'elles peuvent procurer. De plus, notre analyse indique qu'une réforme pourrait entraîner une réduction sensible de ces coûts sans pour autant sacrifier les principaux avantages de la réglementation professionnelle pour le public."

Telle est la principale conclusion d'une étude que le Conseil économique du Canada vient de publier sous le titre "Pour une réforme de la réglementation". Le document critique, entre autres, la profession dentaire pour la nature restrictive de sa réglementation.

Le chapitre traitant des professions ne forme qu'une petite partie de la vaste étude qui traite également de la réglementation des services de transport, des télécommunications, des produits agricoles, de la pêche maritime, de la lutte contre la pollution, de l'hygiène et de la sécurité industrielles ainsi que des entreprises, grandes ou petites.

L'étude trouve que le mode de réglementation le plus contraignant est celui de l'autorisation et que les frais qui s'ensuivent pour la population sont "importants".

Selon le rapport, en examinant les demandes qu'elles reçoivent des groupes désireux d'obtenir un droit exclusif à la pratique professionnelle, les administrations provinciales n'ont pas prêté suffisamment d'importance aux coûts qui s'ensuivent et restreignent le choix du consommateur.

L'étude conclut également que, de toutes les restrictions propres aux professions réglementées, les moins

justifiables ont pour objet de limiter la liberté du praticien dans l'établissement de ses propres prix et dans la diffusion de l'information.

Des modifications apportées récemment à la Loi relative aux enquêtes sur les coalitions ont atténué certaines restrictions, mais la loi n'a pas encore été entièrement mise à l'épreuve.

"Etant donné l'importance de réduire le nombre des restrictions au chapitre de la publicité et des honoraires, il est essentiel de suivre de près l'évolution de la situation dans ce domaine", dit le rapport.

Le Conseil adresse aussi des reproches aux administrations publiques pour la façon dont elles traitent "l'autoréglementation".

Le contrôle revient aux gouvernements

Il précise que, se elles peuvent déléguer leur pouvoir de réglementation, elles doivent en définitive assumer la responsabilité des actes posés par les organismes qui en sont impartis. Les organismes privés doivent être comptable de leurs activités directement au gouvernement.

"Si l'utilisation qui est faite de l'autorité déléguée échappe à la connaissance ou au contrôle des gouvernements, ces derniers ne peuvent à leur tour rendre correctement compte à l'électorat, et le principe d'un gouvernement démocratique responsable n'est plus respecté", lit-on dans le rapport.

Le groupe d'étude recommande que le gouvernement fédéral et chacune des provinces établissent une Commission de réglementation des professions pour en coordonner les divers régimes qui relèvent de leurs compétences respective.

"La Commission pourrait, à tout le moins, avoir pour mandat d'évaluer l'ensemble des lois existantes ou proposées en matière de réglementation des professions et de conseiller les gouvernements à cet égard, de mener des études pour en évaluer systématiquement l'application et l'efficacité et en publier les résultats et, enfin, d'instruire les appels interjetés par les particuliers, par les membres des groupes professionnels ou par des personnes désireuses d'accéder à une profession."

La Commission proposée recueillerait tous les renseignements accessibles sur la réglementation des professions afin d'aider ceux qui doivent prendre les décisions; elle rationaliserait le traitement des plaintes concernant les procédures disciplinaires; enfin, elle aurait le pouvoir d'analyser et d'évaluer les mécanismes de réglementation actuels ou proposés.

L'étude suggère que la Commission insiste pour que les conditions de délivrance des permis de pratique garantissent la compétence des candidats. "La procédure d'autorisation se justifie principalement par l'assurance qu'elle fournit sur la compétence des personnes habilitées à dispenser un service. A l'heure actuelle, cependant, tout ce qui peut être exigé, dans certains cas, c'est que le requérant ait acquis un ensemble de connaissances au début de sa carrière", dit le rapport.

La Commission examinerait aussi le besoin de poser toute autre condition pour s'assurer que les professionnels autorisés à pratiquer offrent des services adéquats.

L'étude demande que les gouvernements revoient entièrement la législation et la réglementation touchant les professions, de façon à n'en retenir que la forme de réglementation la moins restrictive "mais également

compatible avec le besoin de protéger l'intérêt général".

Le groupe d'étude croit qu'il faudra peut-être envisager la possibilité de rendre aux gouvernements le pouvoir de réglementation, à cause du conflit qui existe entre la promotion des intérêts socio-économiques des groupes professionnels et la gestion du mécanisme d'autoréglementation.

"Bien que la réglementation de certaines professions soit nécessaire, cela ne signifie pas, pour autant, qu'elle incombe à leurs membres."

Une des restrictions les plus coûteuses porte sur la définition très large des fonctions réservées aux membres de certaines professions autorisées.

Les tâches actuellement assumées par les plus grands spécialistes ne demandent pas toutes le même degré de formation et de connaissances. Dans bien des cas, certaines tâches peuvent être exercées par des personnes dont la formation couvre une gamme plus restreinte des fonctions professionnelles.

"Un bon exemple à cet égard est celui de la pratique de l'art dentaire et des services connexes."

Diversifier les groupes professionnels

L'étude recommande donc aux gouvernements de diversifier davantage les groupes professionnels qui ont la formation appropriée pour encourager la concurrence sur certains marchés de service réglementés.

Le caractère moins approfondi de leur formation et de leur spécialisation permet à certaines personnes, telles les denturologistes ou mécaniciens dentistes, les pédicures, les optométristes et les chiropraticiens, d'offrir des services moins cher qu'une

personne autorisée à offrir tous les services, de dire l'étude.

"S'il était possible de saisir les occasions qui se présentent dans de nombreux domaines pour remplacer les professionnels par des techniciens spécialisés, il est probable que la production de services augmenterait radicalement et que les coûts diminueraient en conséquence. Un cabinet de dentiste où travaillent des assistants est beaucoup plus productif qu'une pratique individuelle et, dans un bureau d'avocats, des commisjuristes et un système informatisé peuvent avantageusement contribuer à économiser le temps des professionnels."

Une profession ne peut réglementer une autre

Le Conseil soutient que les gouvernements devraient abolir toute restriction imposée par un organisme professionnel de réglementation sur le recours aux services de paraprofessionnels accrédités.

"A notre avis, les membres d'une profession réglementée ne devraient pas se voir conférer, en vertu d'une loi ou d'un règlement, le pouvoir de réglementer une autre profession."

Parlant de l'autorisation, l'étude souligne que, bien qu'ils aient l'autorité et le droit d'exécuter certains actes qui appartiennent à la pratique de la médecine dentaire, les hygiénistes et les techniciens dentaires n'ont pas la permission de vendre leurs services au public. Ils doivent les vendre au dentiste qui, ensuite, les revend à ses patients.

Ces restrictions sur la prestation des services au sein de la profession dentaire ou dans d'autres professions ont "présument" pour objet d'as-

surer l'excellence des soins et de protéger le public. "Cependant, il n'est pas du tout évident, écrit le Conseil économique, qu'elles ont pour effet de rehausser la qualité des services offerts et, même si tel était le cas, que les avantages qui en découlent ont une commune mesure avec les coûts attribuables à ces restrictions... Personne n'a encore pu préciser quelle preuve de qualité pourrait être exigée, s'il en est, au-delà de la simple acceptation par la profession concernée."

Le Conseil critique aussi les restrictions touchant l'annonce des honoraires et de la spécialisation. L'étude précise qu'en se serrant les coudes, certains groupes de professionnels "contribuent à maintenir le statut de la profession au détriment des consommateurs qui désirent obtenir des renseignements pour comparer la qualité des services offerts et les prix demandés par divers professionnels".

L'étude reconnaît la nécessité de certains contrôles pour assurer la compétence des professionnels et la qualité de leurs services, mais elle doute qu'il faille pour cela fixer les honoraires, restreindre la publicité et déterminer l'organisation d'un cabinet de pratique.

Réduire les restrictions

"La réglementation des professions peut entraver l'innovation lorsque les membres n'ont pas la possibilité de mettre à l'essai de nouvelles façons d'offrir leurs services."

Le Conseil demande qu'on examine attentivement certaines restrictions qui pourraient s'avérer inutiles pour la protection du consommateur.

L'étude trouve que là où on a fixé les honoraires, le revenu des professionnels a augmenté de 11,8 pour

cent. Les restrictions touchant la publicité représentent 10,8 pour cent du revenu moyen des professionnels.

"Ces restrictions nous préoccupent non pas parce qu'elles engendrent des revenus plus élevés pour certains groupes (bien que plusieurs pourraient s'élever contre ce mode de redistribution de la richesse), mais parce qu'elles sont sources de gaspillage et d'inefficacité. Elles ont pour effet de priver un secteur très important de l'économie d'une bonne partie des pressions concurrentielles qui, dans d'autres domaines d'activité, ont été à l'origine d'initiatives qui ont permis d'abaisser les coûts", dit le rapport.

Les deux dernières recomman-

dations invitent les gouvernements à diversifier davantage les groupes professionnels qui ont la formation appropriée pour encourager la concurrence sur certains marchés de services réglementés et à interdire toute restriction inutile qui limiterait la liberté du praticien d'établir ses propres honoraires et de diffuser l'information qu'il juge à propos.

"La réglementation est nécessaire et même souhaitable pour protéger les consommateurs qui achètent des services professionnels, mais l'impression générale qui se dégage des travaux effectués dans ce domaine, c'est qu'il est possible de rendre la réglementation beaucoup plus efficace et moins onéreuse", conclut

l'étude.

Le Journal a déjà apporté, dans son édition du mois de septembre 1980, plusieurs réponses aux questions soulevées. Nous reviendrons sur le sujet.

Lors de leur réunion du mois de février 1978, les premiers ministres du pays ont demandé au Conseil économique du Canada d'examiner la question de la réglementation de l'économie et de leur faire des recommandations. Un an après, le Conseil présentait un rapport provisoire et, en juin 1981, il publiait son rapport final, intitulé "Pour une réforme de la réglementation". L'article ci-dessus fait état de ce dernier document.

Extraits de la rencontre avec le Sénat

Voici des extraits de la représentation que l'ADC a faite auprès du Comité sénatorial permanent de la banque et du commerce.

Le sénateur George Issac Smith: Lors des discussions que vous avez tenues avec les représentants du ministère des Finances, avez-vous décelé une raison pour laquelle le gouvernement veut imposer des droits de douanes sur ces articles qui en étaient exempts?

Dr. Hicks: Je n'ai pas discuté comme je m'y attendais avec les représentants du ministère des Finances. Notre mémoire, dont vous avez un exemplaire, contient une lettre d'accompagne-

ment dans laquelle nous demandons à recontrer le ministre d'État (Finances) et ses fonctionnaires pour discuter en détail de ces questions précises. Cette rencontre particulière, avec le Comité et moi-même, n'a pas été tenue. Je crois que notre directeur exécutif a eu des entretiens avec des fonctionnaires du Ministère à ce sujet et je pourrais peut-être reprendre certaines des raisons. Je crois que l'une d'elles était fondée sur la question-clé de notre rapport, c'est-à-dire que le Ministère estime que des droits de douanes devraient toujours être appliqués. Par conséquent, la loi doit rectifier ce qui a été précisé dans l'appel entendu par la Commissions du tarif qui a décrété que la loi devait englober les matières utilisées pour les soins dentaires, mais que le Ministère faisait erreur en percevant ces droits. Je crois que le

Ministère soutient qu'il était dans son droit, mais le Bureau d'appel a décrété qu'il n'en était pas ainsi.

Le sénateur Smith: Êtes-vous en train de nous dire, et je ne vous en voudrais pas dans un cas comme dans l'autre, que l'objectif de la disposition actuelle est de remettre en vigueur la loi que le Ministère estimait devoir être en vigueur avant de se voir débouter par la Commission du tarif?

Dr. Hicks: Je crois que c'est cela.

Le sénateur Smith: Quand cette décision a-t-elle été rendue par la Commission du tarif?

Dr. Hicks: En février 1979. La seule autre chose que je pourrais ajouter pour votre information, et c'est moins important, c'est que lors des discussions avec le Ministère, les fonctionnaires ont fait état d'in fabricant qui avait entrepris la production d'une

marque de formule d'une matière utilisée pour les soins dentaires et qu'ils estimaient, d'après certaines lettres, être justifiés de procéder ainsi. Toutefois, les dentistes utilisent beaucoup de matières. La modification qui est proposée imposerait des droits de douanes sur toutes les matières qui sont importées au Canada pour les soins dentaires et qui servent à des fins de chirurgie réparatrice.

Le sénateur John Connolly: Nous parlons ici d'argent, mais de combien? Est-ce que l'imposition de ces droits de douanes augmente de façon appréciable le coût des soins dentaires pour le patient?

Le sénateur John Godfrey: Quelles en sont les répercussions générales? S'agit-il de millions de dollars?

Dr. Hicks: Monsieur le président, c'est là une chose difficile à évaluer et j'ai prévu que la question me serait posée lorsque j'ai assemblé ma documentation. Statistique Canada, les dentistes et tous les autres fabricants des produits dentaires ont accepté le fait que pour rassembler ces matériaux, il est nécessaire de prendre des articles précis, qui sont utilisés dans la chirurgie dentaire réparatrice, à même les réserves générales, qui pourraient comprendre le papier, les serviettes etc. utilisables dans un cabinet de dentiste. C'est donc une estimation très approximative que je vous donne. Si l'on prend les chiffres qui sont disponibles, nous prévoyons, étant donné que les droits de douanes peuvent s'élever jusqu'à un maximum de 18 p. 100, qu'il pourrait s'agir annuellement de trois à quatre millions et même jusqu'à 5 millions de dollars de droits de douanes sur les matières utilisées pour la chirurgie dentaire

réparatrice. J'espère que vous savez que, pour un dentiste, étant donné le caractère de la profession, la plupart des opérations sont de la chirurgie réparatrice. Par conséquent, le pourcentage qui a été pris à même les fournitures est important.

Le sénateur Smith: Qu'entend-on par chirurgie réparatrice?

Dr Hicks: Dans la description générale des matières qui sont nombreuses, l'amalgame ou les matières en argent qui sont connues de tous constituent la principale matière. C'est le principal produit utilisé. On utilise également les ciments et les plombages; il y a les matières acryliques et ce que nous appelons les matières composées, qui changent assez régulièrement selon la nature du composé chimique. Il s'agit essentiellement des matériaux d'obturation et des matières connexes, ainsi que des matières utilisés pour les prothèses nécessaires pour les procédés de reconstitution, tel l'or qui irait dans un bridge. Voilà les genres de matériaux utilisés en chirurgie réparatrice.

Le sénateur Smith: Pourquoi le ministère permet-il que ces articles soient exempts de droits si l'intervention particulière dans la bouche du patient est pratiquée par un médecin et qu'il soient imposés si l'intervention est exécutée par un dentiste?

Dr Hicks: Je n'ai pas reçu réponse.

Le sénateur Connolly: Si j'ai bien compris, lorsqu'un médecin importe ces matières, elles sont exemptes de droit parce que c'est lui qui va les utiliser, mais elles ne le sont pas si elles sont destinées à un dentiste. Si tel est le cas, la loi est étonnante.

Dr. Hicks: Monsieur le président, c'est bien ce que j'ai compris. J'ignore qui les exempte à la frontière, selon la pratique administrative, parce que le numéro tarifaire est fonction de l'utilisation prévue. Si les matières

sont utilisées en chirurgie réparatrice, elles sont alors en franchise.

Le sénateur Connolly: Pourriez-vous nous lire la clause en question, parce que si cette clause n'établit pas la distinction entre le droit d'un dentiste et le droit d'un médecin, je suis alors d'avis qu'elle devrait s'appliquer aux deux.

Le président, Salter Hayden: Oui. Je le lirai lentement si vous le désirez: Prothèses auditives, nasales, mammaires et autres articles de prothèse médicale ou chirurgicale à l'exception des prothèses dentaires; matières devant être utilisées dans la chirurgie réparatrice, sauf en chirurgie dentaire;

Cette description est suivie d'une longue liste. Je crois que la partie qui nous intéresse serait comprise dans les lignes que j'ai lues:

... autres articles de prothèse médicale ou chirurgicale, à l'exception des prothèses dentaires; matières devant être utilisées dans la chirurgie réparatrice, sauf en chirurgie dentaire;

Le sénateur Smith: Et cette nouvelle taxe serait à quel taux? 14,4 p. 100?

Dr. Hicks: L'élément de l'amalgame a été retiré du numéro tarifaire 47810 et placé sous le nouveau numéro tarifaire 92858. Dans ce numéro tarifaire particulier, à l'heure actuelle, il a été placé à 14,4 p. 100.

Le sénateur Smith: Par conséquent, si vous calculez le montant des coûts additionnels imposés, vous n'auriez qu'à mettre ce taux aux regards du coût de l'amalgame, quel qu'il soit, et à mesure que le coût de l'amalgame

monterait, le montant total monterait aussi.

Dr Hicks: C'est exact, mais d'autre parts, cet amalgame dentaire dont nous avons parlé n'est qu'une seule des nombreuses fournitures qui sont également tarifées en vertu de cette loi particulière.

Le sénateur Godfrey: Si vous prenez le chiffre le plus élevé, soit \$5 millions, et que vous ayez à peu près 10,000 dentistes, peut-être plus, au Canada, selon mes calculs, cela revient à \$500 par dentiste.

Dr Hicks: Une fois de plus, j'aimerais souligner que nous ne sommes pas ici à titre de dentistes soucieux de l'économie de la pratique dentaire, et je vous ai fait remarquer que si notre mémoire atteint son but, il n'en résulterait aucun avantage; s'il échoue, il n'y aura aucune difficulté. Nos doléances sont basées sur le facteur général du coût des honoraires de dentiste et du coût imputable au patient comparativement à la protection que le tarif est censé donner à la société, celle que nous avons relevée, ou d'autres. Le coût par création d'emploi est très élevé.

Le sénateur David Walker: Autrement dit, vous faites la charité à vos patients.

Le président: Non, non.

Le sénateur Walker: Un instant s'il vous plaît. Vous ne voulez pas que ce tarif leur soit imposé.

Dr. Hicks: Monsieur le président, honorables sénateurs, c'est exact. Nous mentionnons dans le mémoire qu'il ne semble pas que ce soit compatible avec le principe général d'un gouvernement qui se préoccupe de la hausse des frais de santé. Bien que de l'avis de certaines personnes, le coût réel par obturation puisse être minime, il ne satisfait pas aux critères fondamentaux. S'il y a une bonne, valable et équitable raison, il faudrait alors la considérer. Dans

notre exposé, nous laissons entendre qu'il ne serait pas équitable qu'il en soit ainsi.

Dr Hicks: Monsieur le président, honorables sénateurs, non, pas pour la première fois. C'est la première fois devant le Sénat que nous avons soulevé un point qui nous préoccupe dans ce domaine.

M.T.S. Gillespie, conseiller du comité: Dr Hicks, pourriez-vous nous donner votre meilleure évaluation du pourcentage de la facture totale présentée au client par le dentiste qui représentait le prix des matériaux?

Dr Hicks: Monsieur le président, pas pour une facture précise, parce que cela dépend du procédé utilisé. Je pourrais peut-être vous donner ces renseignements sur une plus grande échelle. La seule information que j'ai pu obtenir de certaines associations dentaires qui tiennent ces statistiques ne correspond pas à l'information que vous avez reçue. Une province particulière fixait le droit pour les fournitures dentaires annuelles utilisées dans un bureau de dentiste aux environs de \$10,000. Par la suite, j'ai demandé qu'elle partie de ce montant pourrait être utilisée pour la chirurgie dentaire réparatrice. On m'a dit que ce serait \$8,500.

M. Gillespie: Vous avez précédé ma deuxième question, je crois, parce que j'allais vous reporter au rapport de l'Ontario Dental Association, qui fait partie de votre mémoire initial. A la page 21 du mémoire que vous avez présenté à l'honorable Pierre Bussières, vous déclarez ce qui suit:

Nous avons déterminé que les fournitures et matériaux dentaires assujettis aux numéros tarifaires en question représentent une dépense de plus de \$10,500 pour le praticien dentaire de l'Ontario. Si aussi peu que 25 p. 100 des fournitures qui entrent dans cette catégorie sont celles qui

sont assujetties au tarif, vous avez augmenté le coût de la pratique dentaire totale en Ontario de plus de \$3 millions.

Dois-je comprendre d'après cette citation qui est tirée des pages 21 et 22 de votre premier mémoire que vous pouvez dire que le coût de ce changement tarifaire, pour les patients de l'Ontario uniquement, s'élèverait à \$3 millions?

Dr Hicks: Monsieur le président, en posant ma seconde question à l'Ontario Dental Association, je voulais lui demander de désigner des numéros. Elle utilise l'expression "fournitures dentaires" et je lui ai demandé les numéros utilisés pour la chirurgie réparatrice, qui sont les numéros dont nous parlons dans le mémoire.

En examinant ce point maintenant — et c'est pourquoi nous avons présenté au Comité un mémoire officiel — je crois que les calculs de l'Association étaient fondés sur le tarif imposé au prix de détail. Je crois que j'ai tenu compte dans mes calculs d'une meilleure évaluation de ce que la marge commerciale bénéficiaire est dans l'industrie dentaire, ce qui, bien sûr, n'est pas une information facile à obtenir. J'ai obtenu ce qui, à mon sens, était un montant raisonnable.

Le président: Lequel serait le plus élevé?

Dr Hicks: Celui du mémoire de l'Ontario. Mon évaluation pour le Canada se situe dans les environs de \$3 à \$5 millions. J'ai essayé d'être prudent dans mes calculs, mais cela représente toujours une grosse somme d'argent relativement à ce que le tarif tente de faire par emploi. On indique \$3 millions pour l'Ontario seulement, et je croirais que cette estimation est quelque peu élevée.

Le sénateur Connolly: Je présume que la valeur pour le droit est fondée sur le prix de gros?

Dr Hicks: C'est ce que je crois.

Une vaste enquête sur la publicité institutionnelle

L'Association dentaire canadienne a diffusé, le 12 novembre 1980, à la profession un rapport sur l'état de la publicité institutionnelle dans le domaine de la dentisterie. Elle cherchait alors à renseigner les dentistes du pays sur la nature de cette publicité, sa raison d'être, les moyens d'en vérifier la portée, ceux qui la font et les résultats attendus.

Les campagnes de ce genre, qui ont fait l'objet d'une enquête approfondie, ont d'abord été menées par l'American Dental Association et l'Academy of General Dentistry. L'Ontario Dental Association a, elle aussi, mis sur pied son propre projet.

UNE MISE À JOUR

L'American Dental Association a pratiquement annulé sa campagne de vérification de la publicité institutionnelle à l'échelle nationale, après que le "House of Delegates" eut refusé d'approuver un plan de campagne de 3,75 millions de dollars pour 1981. La décision a été prise à l'automne, alors que se poursuivait, au coût de 2 millions de dollars, la campagne de vérification de 1980 menée dans la presse et à la télévision. L'ADA a accepté cependant de poursuivre jusqu'au mois de juin 1981 certains essais de marketing par le truchement d'annonces télévisées dans des villes pilotes.

Les premiers résultats de la campagne de 1980 indiquent que les patients sont un peu plus conscients des soins qu'ils doivent apporter à leurs dents, mais que le nombre des visites chez le dentiste n'a pas augmenté vraiment en regard des données recueillies dans les villes témoins. Des résultats plus complets suivront au cours de l'année.

La documentation explique que, s'il est généralement admis que la télévision peut effectivement engendrer des changements d'opinions et d'attitu-

il s'agit là d'un long processus qui demande un engagement à long terme.

A la suite du refus de mener pleinement la campagne de 1981, on a formé un comité spécial de coordination des communications, composé de neuf personnes et chargé d'examiner à fond la perspective du marketing, avec le soutien d'une firme-conseil, le Management Analysis Centre, qui a son siège social à Boston. Celle-ci a consulté tous les secteurs de l'association associés au marketing, y compris les services de communication et d'éducation.

Le comité a pour mandat de mettre au point un plan global de marketing à longue échéance, qui non seulement servira l'association nationale mais aussi répartira judicieusement les responsabilités au niveau du pays, des États et des localités, de façon à prévenir le double emploi, à assurer de meilleures communications internes et à bien définir les tâches.

La consultation se poursuit déjà depuis un certain temps et a donné lieu à un rapport provisoire qui sera bientôt suivi d'un rapport final. Celui-ci comprendra alors des recommandations précises qui seront examinées à fond par le comité de coordination des communications, avant d'être présentées en octobre, sous forme de résolutions, à l'assemblée du "House of Delegates".

Si la publicité institutionnelle peut faire l'objet d'une recommandation, il n'est pas impossible que l'ADA soit invitée à devenir le dépositaire de tous les programmes de ce genre, y compris ceux mis au point dans les États et les localités, de façon à les rendre accessibles à tous les intéressés. Il se peut aussi qu'on lui demande de produire des blocs de publicité institutionnelle qui seraient accessibles aux sociétés au niveau des États et des localités.

Il se fait déjà de la publicité institutionnelle dans certains États. La

California Dental Association, par exemple, a lancé une campagne de six millions de dollars, répartie sur cinq ans et financée par une hausse des cotisations. Ce programme comprend cependant toute une série d'activités semblables à celles que la Sacramento Dental Society a menées en 1979, à savoir: campagne dans les écoles et auprès des enfants d'âge pré-scolaire, mise sur pied d'une équipe de conférenciers, affectation des porte-paroles, relations avec les médias, campagne par la poste auprès des patients inscrits sur les listes, organisation d'un séminaire sur les relations avec les patients, affichages et publicité payée à la télévision.

Incidemment, "Advertising Age", périodique international de l'industrie de la publicité et du marketing, a classé un des messages publicitaires de l'ADA parmi les 100 meilleurs présentés à la télévision.

L'Academy of General Dentistry a lancé, à la mi-novembre, dans quatre villes un programme pilote de publicité institutionnelle télévisée d'une durée de 18 mois. Le projet est financé par une contribution obligatoire de 30 \$ par membre. Deux villes servent de témoins.

En élaborant son projet, l'AGD a cherché à en faire "l'étude de marché la plus concluante pour la profession, puisqu'elle portera sur les attitudes et les comportements en regard de la demande de soins dentaires".

L'étude est faite par D'Arcy-MacManus & Masius, de Minneapolis, qui a mis au point une théorie appelée "Belief Dynamics" (la dynamique des opinions). (En substance, la théorie soutient que le comportement se fonde sur les opinions, ou convictions, et que ce sont celles-ci qui déclenchent l'action. Pour modifier les comportements ou en créer de nouveaux, il faut modifier les opinions ou en créer de nouvelles. La publicité a donc pour

objet d'influencer les opinions personnelles de façon à engendrer le comportement désiré.)

Cette année, l'Ontario Dental Association a engagé la succursale de Toronto de D'Arcy-MacManus & Masius à titre de conseillers en publicité et a échangé de l'information avec l'AGD.

Les deux organismes ont établi leur publics cibles.

L'Academy s'est fixé comme cible une catégorie qu'elle a appelée les "insoucians" et qui compte 34 410 000 Américains. Il a été établi, dans les études, que ces personnes ont, sur la médecine dentaire, des opinions presque identiques à celles de la catégorie des "patients soumis". Comme cible secondaire, l'organisme cherche à atteindre les "patients réticents" qui, selon les études, se tiennent sur leurs gardes — ils sont enclins à laisser tomber les soins dentaires, à moins de les renforcer dans leur comportement actuel.

Quant à l'Ontario Dental Association, elle s'adresse aux "patients négligents" qui ont passé plus de 12 mois sans voir le dentiste. Selon les données du professeur Don Lewis, de l'Université de Toronto, 60 pour cent des adultes de cette province voient le dentiste au moins une fois par année et 37 pour cent seulement le font de façon entièrement volontaire. Parmi les autres 40 pour cent, 16 pour cent n'ont cessé de voir le dentiste régulièrement que depuis quelques années. C'est d'abord ce groupe de population de 960 000 hommes et femmes que la campagne cherche à atteindre.

Le programme de l'Ontario a donc un double volet: rejoindre les 16 pour cent qu'on vient tout juste de mentionner et rassurer les 37 pour cent de patients volontaires de la sagesse de leur décision.

Pour obtenir plus de renseignements sur les attitudes et les opinions des consommateurs, l'ODA et son agence ont mis sur pied une équipe de recherche qui a interviewé, l'année dernière, divers groupes de patients et de non patients à Toronto et à Cambridge.

La campagne pilote se poursuit, du mois d'avril au mois de septembre, à la télévision et dans les journaux de Peterborough. Elle se concentre sur trois points: il faut voir le dentiste régulièrement; il n'y a pas de raisons de ne pas le faire; il y a de bonnes raisons de le faire.

Elle a pour thème: "Voyez votre dentiste régulièrement... sinon, vos dents vous y conduiront". Elle comprend un message publicitaire de 30 secondes qui est présenté à la télévision en quatre séries distinctes et des textes publicitaires publiés dans les journaux, les deux médias étant utilisés en alternance. Le message télévisé paraît 120 fois dans la semaine et a été vérifié auparavant dans un centre commercial.

Les dentistes de Peterborough, qui pour la plupart participent à la campagne, ont été invités à tenir un registre des rendez-vous, qui permettra la comparaison entre 1980 et 1981. Les nouveaux patients, c'est-à-dire ceux qui n'ont pas vu le dentiste depuis 18 mois, sont invités à répondre à un questionnaire que le dentiste envoie à l'ODA. La publicité, faite à la télévision ou dans les journaux, présente un numéro de téléphone sans frais d'interurbain et invite ceux et celles qui se cherchent un dentiste à le composer.

Le résultat de la campagne sera présenté au bureau des gouverneurs de l'ODA lors de son assemblée de novembre et, si elle s'avère une réussite, on cherchera alors les moyens financiers d'étendre la campagne à la grandeur de la province.

Quant à la campagne de l'Academy of General Dentistry, elle se poursuit à Charlotte (Caroline du Nord) et à Salt Lake City (Utah) où, s'ils étaient projetés à la grandeur du pays, les frais de publicité représenteraient une dépense de 5 millions de dollars, ainsi qu'à Providence (Rhode Island) et à Green Bay (Wisconsin), où les frais "simulés" pour tout le pays seraient de l'ordre de 10 millions de dollars. Les villes témoins sont Columbus (Ohio) et Grand Rapids (Michigan).

Tous les messages publicitaires ont été vérifiés minutieusement avant d'être diffusés afin d'en assurer la portée auprès des insoucians et des indifférents qui forment le public cible; ceux qui ne passaient pas le test étaient mis au rancart.

Ils ont pour but d'ébranler les insoucians, de les amener à changer d'avis et de se faire une opinion plus positive. Les opinions à combattre sont les suivantes: 1. aller chez le dentiste ne vaut pas la peine; 2. cela coûte trop cher; 3. les soins ne devraient servir qu'à la réparation des dents; 4. je ne suis pas prédisposé aux lésions dentaires; 5. cela va faire mal et j'ai peur.

Des sondages par téléphone permettent de recueillir les réactions des dentistes et des consommateurs dans les six localités en question: à chaque endroit, une équipe spéciale de dentistes fournit les registres de rendez-vous pour établir le nombre des patients et les dentistes participants distribuent le questionnaire à leur patients.

À mi-chemin de la campagne, on connaît les résultats sur deux des cinq points à l'étude et ils indiquent un changement pour le mieux dans les attitudes. Les derniers résultats ne seront accessibles qu'après la campagne de 18 mois et une fois les données évaluées.

L'hypnose qui apaise le patient

“Regarde-moi dans les yeux.”

Certains patients dentaires préfèrent entendre cette invitation plutôt que le traditionnel “Ouvrez la bouche grande”.

Chez ceux qu’horripilent le grincement de la fraise, la vue du fauteuil ou même l’odeur du cabinet du dentiste, l’hypnose peut faire toute la différence entre avoir une bouche en santé et ne jamais voir le dentiste.

Au dentiste qui souffre d’hypertension parce qu’il doit surmonter constamment l’anxiété, la surexcitation et parfois même l’hystérie du patient, l’hypnose offre une véritable solution de remplacement de l’oxyde azoteux.

Pour la profession médicale, l’hypnose n’est pas une découverte nouvelle. La technique est aussi vieille que la sorcellerie ou la magie, mais ce n’est que dans la deuxième partie du 18^{ième} siècle qu’on s’est mis à l’utiliser scientifiquement.

Le premier à le faire a été Franz A. Mesmer, médecin viennois, qui l’a appliquée au traitement psychiatrique. Le Dr Mesmer a cependant été vite déconsidéré, parce qu’il croyait que l’hypnose était une force occulte. Néanmoins, le “mesmérisme” (on a donné son nom à la méthode) a continué à intéresser les membres de la profession qui en ont fait grand usage.

Le méthode prend son élan au 19^{ième} siècle

La méthode n’a été vraiment reconnue qu’au milieu du 19^{ième} siècle après qu’un médecin anglais, James Braid, qui étudiait sérieusement la question, se fut rendu compte de son caractère psychologique et inventa, pour en exprimer la nature et les manifestations les mots “hypnose” et “hypnotisme”.

Depuis, un grand nombre de scientifiques ont étudié les divers états hypnotiques et contribué grandement, surtout depuis la Deuxième guerre mondiale, à libérer cette science des tabous de la crainte et de la superstition.

Une technique sure si elle est bien appliquée

Aujourd’hui, l’hypnose est une technique reconnue, dont beaucoup tirent avantage en autant qu’elle est appliquée par des personnes compétentes et dignes de confiance. L’American Society of Clinical Hypnotists compte dans le monde 4 200 membres qui sont exclusivement des médecins, des psychiâtres, des psychologues, des dentistes ou encore qui ont un doctorat en la matière ou se préparent à en obtenir un. La société, qui a son siège social en Illinois, publie un journal trimestriel, parraine des séminaires et organise un congrès annuel de scientifiques.

Le caractère aujourd’hui respectable de la technique devrait rassurer le patient, même si elle fut un temps exploitée par des charlatans. En lui donnant beaucoup de publicité au cours des derniers mois, les médias ont aussi éveillé l’attention sur le recours à l’hypnose au cabinet du dentiste. Des articles publiés dans les magazines des sociétés aériennes et des hôpitaux comme dans les quotidiens, et même l’émission “The Medicine Show” de la Société Radio-Canada, jettent tous un nouveau regard sur l’hypnotisme et ses applications pour prévenir la douleur chez le dentiste.

Le Dr Ralph Yorsh, dentiste de Vancouver, est un de ceux qui sont déjà convaincus des avantages de l’hypnose. Non seulement il l’utilise pour tous les patients qui lui sont envoyés, mais aussi il en enseigne la

technique aux étudiants dentaires de troisième année à l’Université de la Colombie-Britannique.

“En autant que je sache, nous sommes la seule université au monde à enseigner l’hypnose, dit-il. Il est vrai que nous n’y consacrons pas beaucoup de temps — six heures seulement —, mais cela suffit pour couvrir l’essentiel et nous encourageons les étudiants à s’intéresser de plus près à l’hypnotisme après leurs études universitaires.”

Le Dr Yorsh compare l’hypnose à l’oxyde azoteux, mais sans les inconvénients de la chimie. Et c’est par “pur égoïsme” qu’il s’est intéressé à cette méthode. “Le dentiste n’est détendu et content que si ses patients le sont”, dit-il.

Pour vaincre l’anxiété et la douleur

Le dentiste de Vancouver a d’abord appris la méthode en 1959, d’un praticien de Portland (Orégon). Puis, après avoir approfondi ses connaissances en suivant d’autres cours, il s’est mis à appliquer la méthode dans sa pratique et à l’enseigner lui-même dans des séminaires sur le sujet, à titre de fellow de l’American Society of Clinical Hypnotists.

Le Dr Yorsh se sert de l’hypnotisme pour contrôler l’anxiété du patient et la douleur. La méthode qu’il utilise consiste à demander au patient de fixer des yeux un point déterminé, ordinairement le bout de son doigt, et à lui parler doucement, d’une voix posée. L’induction première du patient, dit-il, prend environ trois minutes.

Le Dr Yorsh souligne que le patient a toujours conscience de ce qui se passe.

“L'état d'hypnose modifie l'interprétation du stimulus, dit-il. Détendu, le patient sait qu'il reçoit une injection, mais il ne s'en fait pas pour cela.”

En autant que l'hypnotiseur est bien entraîné, l'hypnose ne présente pas d'inconvénients. Le Dr Yorsh conseille cependant à ses collègues de ne pas essayer de remonter dans le temps pour amener le patient à se remémorer ses premières expériences désagréables chez le dentiste, à moins d'y avoir été entraîné de façon spéciale.

Pour mieux comprendre le patient

“Ceci pourrait remuer de très mauvais souvenirs et personne n'y est intéressé”, dit-il.

Le Dr Yorsh estime que, chez les dentistes qui l'ont apprise, seulement un sur dix utilise la technique de l'hypnotisme. Selon lui, cependant, les connaissances qu'ils acquièrent en la matière amènent souvent les dentistes à changer de style et à mieux comprendre les craintes de leurs patients.

Le Dr Maurice Bygrave, dentiste de Toronto, se dit entièrement d'accord. Beaucoup de dentistes s'inspirent, selon lui, des techniques de l'hypnose sans cependant les étiqueter comme telles.

“Un bon dentiste, dit-il, a l'habitude de rassurer ses patients. L'hypnotisme ne fait qu'un pas de plus.”

Les médias ont accordé récemment beaucoup d'attention à l'expérience du Dr Bygrave en matière d'hypnose, après que la Presse Canadienne eût diffusé un article sur le sujet dans les journaux d'Ontario. Contrairement au Dr Yorsh, cependant, le Dr Bygrave déclare qu'il peut être des mois sans y recourir.

“Cela dépend du patient, dit-il. Je m'en sers pour calmer les appréhensions et les craintes attribuables à des expériences désagréables que le patient a pu avoir dans le passé. Cela peut arriver quatre fois par semaine, selon les circonstances.”

Le Dr Bygrave a participé à son premier séminaire sur l'hypnose à l'hiver de 1968. Cela avait lieu à Chicago sous l'égide de l'American Dental Association. L'expérience acquise avec le temps l'a amené à modifier sa technique et il trouve maintenant qu'il n'est pas toujours nécessaire d'hypnotiser véritablement le patient pour apaiser ses craintes. Souvent, il suffit de lui parler calmement et de lui montrer de la compréhension.

Le Dr Bygrave précise que l'hypnose réussit dans la mesure où le patient l'accepte.

“Il faut d'abord corriger les fausses idées qu'il pourrait s'en faire et surmonter la peur de voir apparaître un squelette au fond d'un placard. Il faut que le docteur et le patient se comprennent bien. Il faut que le patient soit à l'aise et sache bien que vous n'irez pas déterrer ses pensées les plus intimes.

“Personnellement, je ne vais jamais jusque-là. Je laisse ces questions au psychiatre ou au médecin. Je me sers de l'hypnose comme moyen de détente seulement”, de dire le dentiste.

Le Dr Bygrave ajoute qu'il montre à ses patients certaines techniques hypnotiques pour leur apprendre à se détendre au besoin en d'autres occasions, ailleurs qu'au cabinet du dentiste.

“Je crois, dit-il, que la méditation est directement associée à l'hypnose. Sans même nous en rendre compte, il nous arrive tous parfois de fouiller dans notre subconscient et de nous libérer des scrupules de notre conscience.”

Le Dr Jerry Litman, de Winnipeg, a paru récemment à l'émission télévisée, “The Medecine Show”, qui faisait part d'une enquête sur l'utilisation de l'hypnose dans les sciences médicales. Il s'occupe de la question depuis une quinzaine d'années et, comme le Dr Bygrave, il soutient qu'il n'est pas toujours indiqué d'hypnotiser comme tel le patient.

Des patients agréablement surpris

“La plupart des techniques exigent la concentration visuelle, dit-il. Mais, parfois, il suffit de parler au patient.”

Le Dr Litman se sert de l'hypnose seulement chez certains patients choisis et rarement chez les enfants. Il ajoute que ceux qui acceptent de se faire hypnotiser sont ordinairement agréablement surpris de constater que le traitement des dents s'est fait sans douleur.

Le Dr Litman ne peut s'expliquer ce renouveau d'intérêt envers l'hypnose, mais il croit que la technique se fera avec le temps de plus en plus populaire au cabinet du dentiste.

Tous deux, patients et dentistes, sont intéressés au traitement sans douleur: d'une part, c'est la peur qui en bonne partie éloigne 50 pour cent de la population du cabinet du dentiste; d'autre part, c'est cette même peur, qu'ils doivent constamment combattre, qui mène beaucoup de dentistes à la dépression.

Pour certains dentistes, l'hypnose offre une solution. Comme le dit le Dr Bygrave, “l'hypnose sera inévitablement intégrée au curriculum des facultés de médecine dentaire. C'est un instrument qui aide à mieux prendre soin du patient et dont nous avons besoin. De nos jours, il faut y être sensibilisé”.

Change in dental student profiles: Preadmission to pregraduation

A pilot study

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SUMMARY

Since 1974, in addition to testing cognitive achievement and psychomotor aptitude, The Canadian Dental Association's Dental Aptitude Testing program has included the 16 Personality Factor Questionnaire (16PF). The purpose of this pilot study was to examine the preadmission and pregraduation 16PF profiles of a class of dental students with respect of the norm population and then compare the profiles following dental undergraduate education. Students entering the Faculty of Dentistry at the University of British Columbia were just like all other university students. However, four years later they were very different relative to the university and general adult population. When the preadmission and pregraduation profiles were compared, significant differences were noted in all personality traits. It was unclear as to whether the change was due to maturation or to the interaction between personality and the character of undergraduate dental education. Future investigation should involve a larger sample size for the results to be considered conclusive.

INTRODUCTION

Interest in expanding the understanding of dental student behavior and success to include non-cognitive factors had increased as dissatisfaction with current graduates had been expressed.¹⁻⁶ Standardized tests such as the Opinion, Attitude and Interest Survey,⁷ the Allport-Vernon-Lindsay Study of Values, the Edward Personal Preference Schedule, the Strong Vocational Interest Blank, and the California Psychological Inventory have all been used, with variable and disappointing results, to identify the social characteristics and role orientation of dental students.⁸⁻¹¹ In an effort to obtain non-grade data of dental applicants, the Canadian Dental Association,

after consultation with the American Dental Association, introduced the 16 Personality Factor Questionnaire (16PF) into its national dental aptitude testing program in 1974.¹² The data collected were not used for admission purposes but rather to establish a research data base.

Because of the implications of using such non-cognitive data in admission procedures, it would be important to study personality trait stability. Psychological trait theory asserts that there is little likelihood of radically altering personality structure of dental students during their undergraduate education. Any changes that might occur over that period of time would be expected to be explained either by maturation or be related to changes inherent in the learning environment of the dental school. Therefore the purpose of this study was to investigate the changes, if any, in personality characteristics, between the entering and graduating dental student at the University of British Columbia.

METHODS

At the time of writing the Dental Aptitude Test (DAT) all dental student applicants wrote Form A of the 16PF. The resulting sten scores were calculated to define a personality profile according to the 16 traits of normal personality which are surveyed by the test. Sten scores are distributed over 10 equal interval standard score points from one through 10, with the population mean fixed at sten 5.5¹³. The norm population in this case was a combined male/female college population centred upon and corrected to 20 years.

Applying the same standardized format of testing, senior students (n=32) at the University of British Columbia were scored to both the college norm and to the combined male/female general population centred upon and corrected to age 30. The adult norm group was selected as a minimum of four years had passed and in many cases

more, as frequently students had not been accepted on first application to the faculty.

Scoring of the 16 personality characteristics defined a student profile and a Hotelling t-test was done to determine any significant difference between the dental students and the norm population. The null hypothesis of no difference between the preadmission and pregraduation scores was tested using paired t-tests. This permits the testing of the null hypothesis with repeated measures data. The rejection level was set at $p = .05$.

RESULTS

The two personality profiles for each of the 16 primary traits and four secondary traits are illustrated in **Fig. 1**. Although some factors graphically appear more deviant, the preadmission profile (norm: college population), was not significantly different from the norm in any variable at the 95 per cent confidence level. The pregraduation profile however (norm: general population) was significantly different from the norm in 14 of the 16 variables. This was a consistent finding using either the college or general population as the norm. The two scales on which the students did not differ from the defined norm were those of intelligence and trusting-suspicious.

The paired t-test comparing preadmission and pregraduation profiles showed the difference to be highly significant ($p < .001$) in all 16 primary traits.

DISCUSSION

At the University of British Columbia the entering dental student is a typical university student as presented by the personality profile in **Fig. 1**. Those factors that might appear to be quite different from the norm population are not statistically significant. On the contrary, the senior

student being significantly different from the general population on 14 of the 16 scales could be described as reserved or cold, easily frustrated, conforming, very serious, less rigid, more restrained, very self-reliant and realistic, practical, forthright, self-assured, conservative, a "joiner", one who tends to follow his own urges and who is composed. He is like the general population in intelligence and degree of trust. Although this profile is somewhat more extensive and specific in description, it is in agreement with the broad profile derived by Kirk et al.¹¹ In Dworkin's study¹⁴ comparing freshmen and senior students, he found that the seniors acted in a more defensive manner and generally withdrew from situations that humiliated them. These observations are consistent with the pregraduation profile found in this study.

At the end of the four years of undergraduate education the personality profile has changed significantly. The general tendency is for the profile to shift "to the left" on most scales. Compared with what he was like entering dental school, the senior student is more reserved, tends to more concrete than abstract thinking, is more easily upset and submissive, more likely to disregard rules for expediency and is more timid. He is easy to get along with and adaptable, highly practical rather than imaginative, less pretentious, more self-assured and more conservative. He prefers more group support, is less compulsive and more relaxed than he was when he began dental school. To expand on the two factors that are most different, a person with lower ego strength tends to be low in frustration tolerance for unsatisfactory conditions, easily emotional and annoyed as well as active in dissatisfaction. Being low on the uncontrolled/controlled scales he may be careless of protocol, follow his own urges and not be overly considerate, careful or painstaking.

LEGEND

Preadmission —————
 pregraduation - - - - -

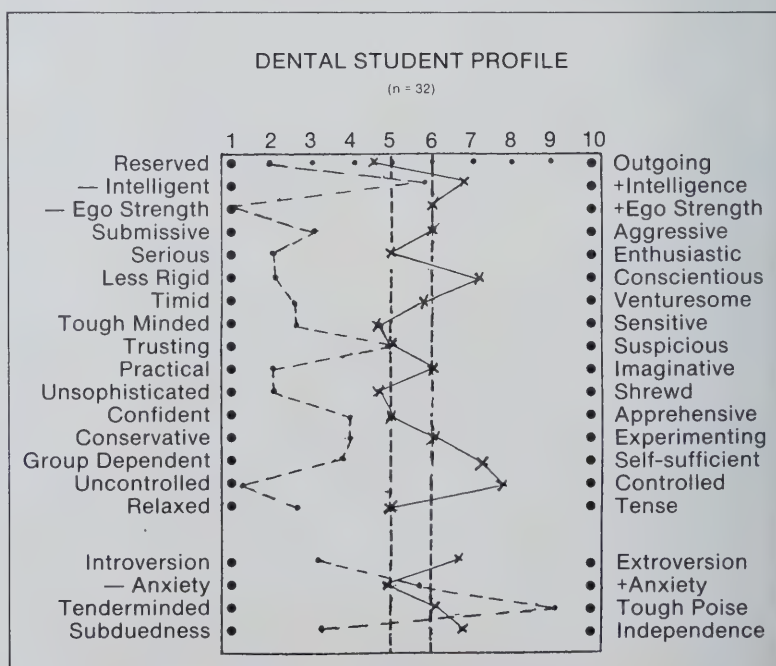


Figure 1

The four scales at the bottom of **Fig. 1** represent second order traits. These can be viewed as broader influences or organizers contributing to the 16 primary traits. Indeed, the second order scores are derived from combining and weighting the primary trait scores. Knowing the scores on the second order, in addition to those on the primaries, gives a more complete picture. In general terms, after four years of dental education the student is more introverted and self-sufficient, able to achieve those things that seem to be important to him, he is more decisive but less aggressive and more group dependent orienting his behavior toward those who will give support. This could be interpreted as either favorable or unfavorable depending on the environment in which the individual is expected to function. For example, introversion is a favorable predictor of precision workmanship and being either too high or too low on the anxiety scales can interfere with achievement. Consequently these characteristics could be considered as favorable for the graduating dental student.

It is entirely conceivable that, given the nature of dental undergraduate education, i.e. constant evaluation and criticism in an effort to attain excellence, that individuals could become more introverted, reserved and submissive while still being realistic, practical and self-assured with respect to what competency levels are necessary to assure graduation. Very little research has been done, however, on personality and the educational process. Two studies⁵⁻¹⁶ that did address the issue of what university education does to personality showed changes that tended to increase scores on most factors which is contrary to what has been observed in this study of dental students. The one area of agreement is that ego strength tends to fall.

Considering the nature of dental practice these changes in personality could be interpreted as favorable. Regardless, it is still unclear as to whether or not the changes occurred as a result of conditions associated with the undergraduate learning environment. One is apt to believe, and personality theory would confirm it, that dental applicants due to their age and previous university experiences are already "mature" when they are admitted into the dental faculty. If this is the case, then something in the learning environment of the dental school is contributing to the personality changes. Dental educators have often commented on the change observed within a class from first year to graduation and the fact that each class seems to have its own "personality".

It is evident that further investigation is necessary in order to clarify this matter. Some questions that should be considered: What do the educators and/or "the system" do that brings about personality changes? Are they real, or after graduation do they return to more closely approximate the preadmission profile? Repeating the 16PF a year following graduation might provide some clues. Also, would there be a difference in profile if the test was retaken

following admission to dental school and compared with the preadmission profile? Rothman¹⁷ found there was a difference in a medical student personality when he compared application and admission data. It is possible that the postadmission profile may be more stable when compared with the graduation profile conclusions.

In conclusion, the null hypothesis was rejected and the findings suggest that in this particular group of students, personality traits did not remain stable from the time of application to graduation. It is unclear though whether or not these changes are real or circumstantial. One should be cautious in generalizing the results of this pilot study, as the sample size was small. However, the results have stimulated some important questions, and the study will be repeated using a larger population in order that the results can be deemed conclusive. Further, it would appear that at this point it would be unwise to use student personality data for any purpose other than research until further investigation contributes to our understanding of the interaction of personality and dental education.

REFERENCES

- 1 Gough, H.G. and Kirk, B.A. Achievement in dental school as related to personality and aptitude variables. *Meas and Eval in Guid* 2:225, 1970.
- 2 Phillip, J.P., and Reitz, W. Statistical models for the selection of applicants for the D.D.S. program. *J Dent Educ* 35:150, 1971.
- 3 Grainger, R.M. Validation study of DAT. DAT Committee of CDA, 1972.
- 4 Grainger, R.M. Report on validity of Dental Aptitude Test used in Canadian dental schools. DAT Committee of CDA, 1973.
- 5 Horton, P.S., et al. Non-grade attributes in selection of dental students — a pilot study. *J Am Coll Dent* 44:127, 1977.
- 6 Moore, D.S. Should a prerequisite for acceptance into dentistry be a high dental I.Q.? *J Canad Dent Ass* 44:369, 1978.
- 7 Ginley, T.J. Present status and future plans of the Dental Aptitude Testing Program. *J Dent Educ* 30:163, 1966.
- 8 Fusiloo, A., and Metz, S. Social science research on the dental student. Social sciences in dentistry: a critical bibliography. N.D. Richards and L.H. Cohen, eds. A. Sijthoff, The Hague, Netherlands, 1971.
- 9 Chen, M.K.; Podshadley, D.W., and Shrock, J.G. A factorial study of some psychological, vocational interest, and mental ability variables as predictors of success in dental school. *J Appl Psychol* 51:236, 1967.
- 10 Kalis, B.L.; Tocchini, J.J., and Thomassen, P.R. Correlation study between personality tests and dental student performance. *J Amer Dent Ass* 64:656, 1962.
- 11 Kirk, B.A.; Cummings, R.W., and Hackett, H.R. Personal and vocational characteristics of dental students. *Pers and Guid J* 41:522, 1963.
- 12 Boyd, M.A.; Graham, J.W., and Teteruck, W.R. Personality testing for dental admissions. *J Canad Dent Ass* 45:405, 1979.
- 13 Handbook for the 16PF, Institute for Personality and Ability Testing. Champaign, Illinois, 1970.
- 14 Dworkin, S.F. Personality interactions with dental education — an hypothesis and exploratory study. *J Dent Educ* 31:369, 1967.
- 15 Graffam, D.T. Dickinson College changes personality. *The Dickinson Alumnus*, 44 (1):2, 1967.
- 16 Nichols, R.C. Personality change and the college. National Merit Scholarship Cooperative Research Reports, Evanston, Illinois, 1965.
- 17 Rothman, A.I.; Byrne, P.N., and Parlow, J. Longitudinal study of personality traits in medical students from application to graduation. *Br.J. Med Educ* 7:225, 1973.

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Patient supply for dental schools in the 1980s

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ABSTRACT

Dental schools require a properly balanced supply of patients to carry out effective teaching programs. Social developments of the last two decades have had a noticeable impact on this patient supply and shortages of certain types of patients may be expected. This article suggests directions which schools will have to follow to attract patients and to maintain realistic learning situations.

One of the problems which dental schools will have to confront to an increasing extent in the 1980s will be the provision of an adequate patient supply for their teaching clinics. It is not an entirely new problem but several developments in the last two decades will make it more acute.

Ten years ago, the results of a survey of 46 American dental schools were communicated to a meeting of the American Association of Dental Schools.¹ Even at that time, seven per cent of the department chairmen who were questioned reported great difficulty in attracting patients to their clinics, and 24 per cent reported some difficulty.

The first third-party payment plans were introduced in the United States at that time. The schools, accordingly, had also been asked whether they anticipated a worsening of the situation from this new aspect of dental care.

Almost a quarter of the canvassed clinical departments answered that they expected to encounter great difficulty in attracting patients; another 30 per cent expected some difficulties and only 45 per cent thought their patient supply would probably not be affected. One dean expected third-party involvement would, in fact, increase patient flow to his school because there was a critical dental manpower shortage in his state and patients who could now expect some financial support for their dental treatment would look to the dental school to obtain it.

Actual or expected patient shortages were most serious in the area of oral surgery, complete dentures and relatively simple operative dentistry. A review of the liter-

ature from North American dental schools and experiences at McGill University indicate developments which will have a decided influence on patient supply for dental schools in the future:

1. Government dental care programs will probably have the greatest impact, especially if they are universal (i.e.; all citizens are covered) and if they do not make special provisions to include dental schools as providers of the insured services. In Quebec, all children under 16 years of age can now obtain free dental care in private practices. As a result, dental faculties in Quebec have been forced to recruit young patients. Free dental care must be offered to those they can attract since the Quebec Health Insurance Board will make payments only to practising dentists for services rendered to these children. If the same services are given in dental schools, no payment is made.
2. Changes in legislation concerning health-care professionals will affect dental schools as well as practising dentists. The licensing of denturologists in Quebec has contributed to the shortage of full-denture patients at the dental schools, not only because fees charged by denturologists are competitive but also because they are located in areas where their services are needed most, and where they are easily accessible.
3. The introduction of private insurance plans, especially if they do not include dental schools as qualified treatment centres, will certainly have an impact on the supply of patients in the younger and middle age groups.² Not only will they reduce the supply of patients who require relatively simple operative dentistry but also of those for whom smaller bridges in a private office have now come within financial reach.
4. The increased affluence of the younger age groups, especially the greater number of childless working couples, will mean fewer patients for teaching clinics and increase the demand for treatment in private offices.
5. The progress of preventive dentistry and an increased dental awareness of the population will certainly have an impact on the schools' patient supply. These developments have already reduced the demand for extractions

and full dentures. They have, on the other hand, created an increased demand for very complex treatment for mostly older patients who no longer want full dentures and are trying desperately to save their remaining teeth. This has brought a new challenge to the dental schools, where these patients apply for treatment in ever-increasing numbers. Traditionally, schools have considered their oral problems too complex to be treated in their undergraduate clinics but this may have to change if these patients will turn out to be the only ones left.²

Attempts by North American dental schools to increase their supply of patients, and publications and speeches by leading dental school administrators indicate directions which they will have to follow to secure the patients who will enable them to present effective teaching programs in the future.

1. Excellence of services provided

Above all, dental schools must maintain high standards of patient management. This not only applies to the quality of treatment but also to the atmosphere created and the consideration shown to their patients,¹⁻⁵ who, if they are satisfied, will stay to have their treatment completed and will refer their friends and relatives to the schools. This will make it mandatory for the schools to develop students who are competent and considerate. It will require pre-clinical programs which will stress excellence and develop work habits which can be transferred to the clinic without too much interruption. It will require instructors, full- and part-time, who become involved and concerned about their patients' welfare, and are not attracted to the schools merely for their self gratification and the prestige which a university appointment carries. It will require clinic administrators who will ensure that patients are dealt with in a fair manner, that sensible treatment plans are established which take into consideration the patients' own wishes and that treatment is carried out swiftly.

2. Active recruiting directed at specific population segments

At McGill University, the Director of the Division of Paedodontics personally examines children at elementary schools in the poorer districts of the city, where often both parents work and the children are not taken to the dentist, even though treatment is free. In co-operation with the school administration, parent groups and volunteers who bring the children to the clinic, he has been able to keep students supplied with young patients.

Other schools have attempted to attract welfare patients³ or university students^{6,7} for their teaching clinics.

The University of Southern California has established a very favorable prepayment plan for university staff and students.³

3. Advertising dental school services

McGill University has never tried to sell the services of its dental school to the public through direct advertising but an attempt has been made through newspapers and television programs to bring the existence of these services to the public's attention in an indirect way.

It is the author's belief that dental schools should not hesitate to advertise if the need arises, but this will have to be carried out on the basis of a very good understanding with the local dental community, practitioners and regulatory bodies alike.

4. Extramural programs

In 1975, 52 dental schools in North America provided some form of off-campus training.^{8,9}

The dental school of the University of California in Los Angeles (UCLA) established a satellite clinic in 1970, at a 10-mile distance from its main building. This well-equipped five-chair clinic brought students to an area where there was an acute demand for dental care. An additional benefit to the teaching program was that students were able to observe some pathological conditions in that clinic which they had never seen before.¹⁰

One year later, UCLA established a satellite clinic in White River, Arizona, on an Indian reserve, as a project in community involvement.¹¹ An unforeseen advantage which this clinic brought to the school was that it provided an abundant supply of full-denture patients. These patients had become very scarce in the university's drawing area in Los Angeles.

Also in 1970, the University of the Pacific in Los Angeles built a 12-chair satellite clinic.¹² Its extramural system has since grown into seven facilities which boast 38 chairs. At this school all lectures in the final year are scheduled for Monday mornings; students who work in extramural facilities spend the other four days of the week in these clinics. Each student must work in at least two clinics for a total of eight weeks. General practitioners, most often drawn from the area where the extramural clinic is located, serve as demonstrators. They all hold university appointments and spend one day per week in these clinics.

The University of Kentucky operates a very ambitious extramural program.¹³ Students work in private offices as assistants, hygienists, and eventually as operators. The dentist in whose office they practise holds a university

appointment and his office becomes an extension of the dental school. A director of extramural relations is responsible for the program and the school's insurance policy covers students in the outside offices.

Students must work under supervision, but this can presumably be the type of supervision that is exercised from an adjacent operatory. During the academic year, students spend from two weeks to nine months in these programs, depending on their academic standing, the type of experience they desire and the type of experience that can be made available in the dentist's office. They must also work a minimum of eight weeks during the summer under one of these arrangements. The preceptor pays his student a pre-determined salary during this time; he is not allowed to place him on commission or on a percentage basis.

If dental schools find they can no longer attract patients to their main clinics, they will have to reach out into areas where a need for their services exists, through the establishment of satellite clinics or similar facilities. Admittedly some of the programs mentioned may have more than one objective, but even though they provide learning experiences which may not be available at the dental school, they also reach patients who probably would not have come to the main clinic.

The United States Health Professionals Educational Assistance Act of 1976 specified that schools must have an approved plan to train all students in ambulatory care settings away from the main teaching site in order to qualify for capitation grants.¹⁴ These learning experiences are also suggested by the Carnegie Commission on Higher Education.¹⁵ McGill University has affiliations with two hospitals where senior students each spend one week. During this time they do not have to be supported by the school's own patient supply.

Extramural programs may bring about their own peculiar problems. One dean mentioned the danger of a loss of diagnostic acumen in extramural clinics.² One might also be concerned about general excellence if a healthy balance is not found between intramural teaching and extramural experiences.

5. Inclusion of dental schools in government and private insurance schemes

Schools must address themselves to the problem of third-party involvement, be this by the government or by private companies. They must attempt to become accepted as providers of insured services.² This means that insurance carriers and the public in general must be convinced that the schools can render quality care; labor

unions and similar consumer groups must especially receive this message. To convince the public of the excellence of their services, schools should not hesitate to consider publicity campaigns which can be arranged without cost through various media and they should not be too modest when describing the services they provide.

The author feels very strongly that the Canadian Dental Association and the Association of Canadian Faculties of Dentistry should, where appropriate, approach provincial governments and private insurance carriers in an attempt to have them universally consider dental schools as providers of insured services. Our governments especially must be made to realize that they cannot jeopardize the efficient training of health professionals and must guarantee the continued existence of effective training centres in their future planning.²

Private insurance carriers might be persuaded to allow patients to forgo co-payment requirements if they have their treatment carried out in dental schools.² Governments might be approached to establish co-payment schemes for certain services if they intend to expand coverage in the future. Again, the co-payment feature could be dropped at the schools.

6. Resistance to government pressures to expand

In the United States, government appears to exert considerable pressure on schools to increase their output of graduates. The same trend is apparent in European countries which the author visited during a sabbatical leave. Some governments may have bona fide reasons for this pressure as a genuine attempt to improve access to dental care, but there can be no doubt that in some European countries governments are making a deliberate attempt to create an excess of health professionals who will be forced to work at extremely low fees or salaries. Interestingly enough, their policies have had an unexpected effect on some European dental schools. Patients are coming back to them because the care in some private offices (for the fees which governments pay or impose) is so poor that they would rather entrust themselves to an inexperienced student who is well supervised and well motivated.

It is doubtful that any of the Canadian dental schools can afford to expand and still count on an acceptable patient supply. Schools should resist pressures to expand, and where government financing is based on student number, a different mode of financing should be found.

7. Acceptance of patients with complex treatment needs

Dean McLeran of Iowa, in an address to the 1978 meeting of the American Association of Dental Schools,²

stated that schools could no longer afford the luxury of accepting "teaching cases" only and turning away all other patients with their needs unmet.

Dental schools appear to have no shortage of patients with complex treatment requirements. Their management has undergone definite changes. In the past many received piecemeal treatment as student after student plucked from their requirements those which helped him accomplish his clinical quotas, while the over-all oral conditions slowly deteriorated. As schools acquired staff to pre-screen patients, many patients were simply not accepted for treatment. Meaningful comprehensive treatment could not be accomplished, and the fragmented care which students provided installed a poor practice philosophy in them.

This may well have to change as the supply of patients with simple treatment requirements dwindles. Students may have to rely to an increasing extent on mannequins to establish their competence and efficiency in simple restorative dentistry, and possibly in other skills such as local anaesthesia, extractions, simple periodontics, and even in more complex restorative procedures. They may have to gain much of their actual clinical experience on patients who represent relatively challenging treatment problems. Nor will the challenge be only to the students; a much greater challenge faces the teachers and administrators in the schools.

A curriculum must be evolved which, in composition and sequencing, will prepare students to understand fully the etiology, predisposing factors and prognosis of these complex situations; to diagnose them correctly, to learn to plan treatment for these patients and to carry it out.

Clinical protocols must be devised which will allow treatment to progress in well-defined stages and will divide complex restorative procedures into manageable increments, since students will not be able to advance treatment at a very fast rate.

Finally, instructors will have to become very thoroughly involved with the treatment challenges presented by each and every patient and their students' attempts to solve them. Of necessity, there will have to be more teaching and demonstrating than marking.

The philosophy of the Division of Prosthodontics at McGill University is that it wants to meet this challenge. A very positive approach towards students' potential and motivation is at the basis of this philosophy as well as a conviction that they will truly benefit from these learning experiences if they are guided expertly through the various diagnostic, planning and treatment stages.

A number of developments have been listed which will influence patient supply for the dental schools in the future. Different schools will be differently affected. In Canada, where health legislation is a provincial prerogative, regional differences can be expected. Likewise, the measures which schools will adopt to cope with the problems will vary and will depend very much on local conditions and population characteristics. However, one can expect that the basic approaches enumerated above will in some manner be employed by all Canadian schools.

This paper is based on a presentation to a teaching conference on Clinical Administration, sponsored by the Canadian Dental Association, and held in Saskatoon, Saskatchewan, June 1979.

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REFERENCES

- 1 Meskin, Lawrence H. Current and future problems in obtaining teaching patients. *J Dent Educ* 33:112, 1969.
- 2 McLeran, James H. et al. How will dental education adapt to the third party payment system? *J Dent Educ* 42:598, 1978.
- 3 Ingle, John E. Survival: improving the patient pool and clinic revenue. *J Dent Educ* 36:24, 1972.
- 4 McLeran, James H. Who cares for people? *J Dent Educ* 42:8, 1978.
- 5 Beaudreau, David E. Social change and clinical excellence in dental education. *J Dent Educ* 41:174, 1977.
- 6 Gates, Randy L. and Goldstein, Charles M. University students: a good source of dental school patients? *J Dent Educ* 41:635, 1977.
- 7 Stacey, Dennis C. et al. Factors affecting patient completion of treatment within a student dental clinic. *J Dent Educ* 42:609, 1978.
- 8 Gardiner, James F. and Lotzkar, Stanely. A survey of extramural experiences of dental students. *J Dent Educ* 39:530, 1975.
- 9 52 dental schools now provide off-campus training. *Bulletin Dental Educ* 8(10): 1 and 3 October 1975.
- 10 Freed, James R. Educational value of a university sponsored community dental clinic: a three-year student evaluation. *J Dent Educ* 40:93, 1976.
- 11 Vig, Robert G. Whiteriver, Arizona. Satellite clinic of the U.C.L.A. School of Dentistry — a three year report. *J Dent Educ* 40:233, 1976.
- 12 Pride, James R. and Chambers, David W. An expanded model for extramural dental clinics. *J Dent Educ* 41:191, 1977.
- 13 Heise, A. Lee. et al. Experiential education for dental students at the University of Kentucky. *J Dent Educ* 40:272, 1976.
- 14 Vann, William F. Evolution of the dental school curriculum — influences and determinants. *J Dent Educ* 42:66, 1978.
- 15 Carnegie Commission on Higher Education. Higher education and the nation's health: policies for medical and dental education. New York, McGraw-Hill, 1970.

Dental considerations for patients on chronic dialysis and renal transplant recipients

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ABSTRACT

In order to deliver effective oral health care, both to patients on chronic hemodialysis and renal transplant recipients, the present-day dentist should comprehend normal kidney physiology, some pathophysiology of renal disease and the indications and treatment methods used in the management of chronic renal failure.

This paper reviews these aspects and discusses several important medical and dental features of chronic renal failure.

With the introduction of hemodialysis in the home and improvements in successful kidney transplants, it can be anticipated that increasing numbers of these individuals will seek care in general dental practice/

RENAL PHYSIOLOGY

The kidney is a complete organ which is responsible not only for the excretion of most of the end products of metabolism, but also for controlling the pH and volume of tissue fluids. The human kidney contains about one million nephrons,² each of which contributes to the formation of urine. A nephron can be subdivided anatomically in the following parts: glomerulus, proximal convoluted tubule, loop of Henle, distal convoluted tubule, and collecting duct. (Fig 1.).

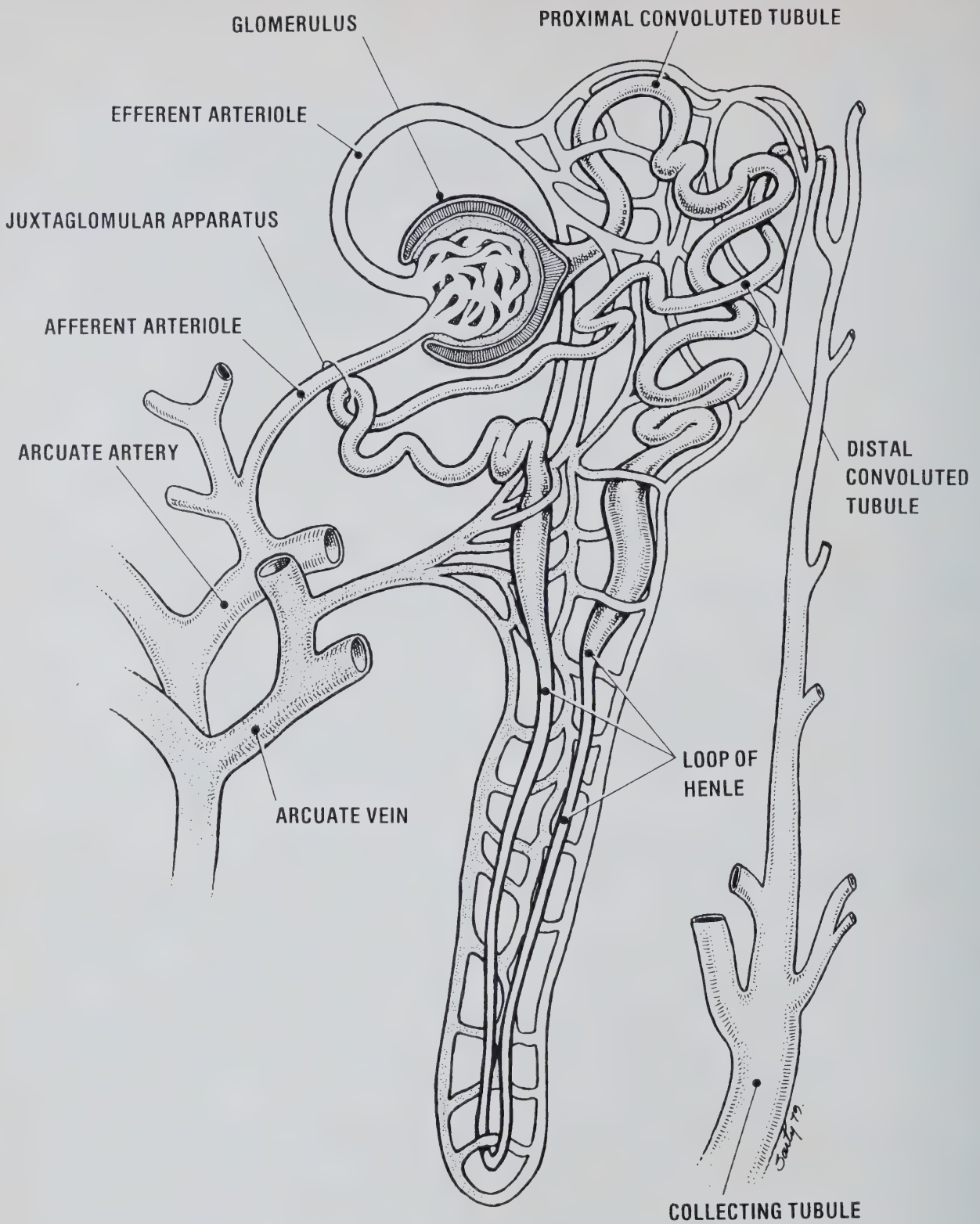
Blood enters the glomerulus through an afferent arteriole, and leaves via an efferent arteriole. The glomerulus is a network of capillaries enclosed in Bowman's Capsule. Pressure of the blood in the glomerulus causes fluid to filter into the capsule, from which it flows into the proximal convoluted tubule. A pair of human kidneys in the resting state filters about 180 litres of fluid every 24 hours which results in the formation of about one litre of urine. The filtrate passes from the proximal tubule into

the loop of Henle, from where it flows into the distal convoluted tubule and finally into the collecting duct. This collecting duct passes from the renal cortex down through the medulla, and empties its contents into the renal pelvis and, thereafter, into the ureter and bladder.

As the glomerular filtrate makes its journey through the tubules, most of its water and varying amounts of solutes are reabsorbed into the peritubular capillaries which are referred to as the vasa recta.

Urea, creatinine, uric acid and sulfates, which are end products of metabolism, are major substances cleared by nephrons. Sodium, potassium and chloride, must also be cleared. During passage down the proximal convoluted tubule, 80 to 90 per cent of the volume of the glomerular filtrate is reabsorbed. Sodium and chloride ions are actively reabsorbed in the proximal convoluted tubule, electrical neutrality being maintained. Potassium ions are reabsorbed proximally and secreted distally. Under the influence of the carbonic anhydrase enzyme system, hydrogen ions are actively secreted and bicarbonate ions are reabsorbed. When the tubular fluid reaches the end of the proximal convoluted tubule, its volume is a small fraction (about 10 per cent) of the original volume of the glomerular filtrate with little change in its osmolality and pH. In the descending limb of the loop of Henle, because of its selective permeability, water passes into the hypertonic medullary interstitium and this process results in concentration of the tubular contents. Chloride ion is actively transported out of the water-impermeable ascending limb of Henle's loop then diffuses into the descending limb and is convectively carried to the renal medulla. This maintains medullary hypertonicity with respect to the renal cortex.

The distal convoluted tubule is anatomically intimate with the juxtaglomerular apparatus. Through a combina-



THE HUMAN NEPHRON

(After Smith, The Kidney, Oxford University Press)

Fig 1 The human nephron (Reproduced from the Kidney, Oxford University Press)

the illness, only the most serious dental emergencies would be treated during the management of acute renal failure.

Chronic renal failure

Considerable success has been realized in the management of chronic renal failure by use of intermittent hemodialysis and renal transplantation.⁵

Hemodialysis

During hemodialysis, blood is transported to the kidney machine from an arteriovenous fistula, usually in the patient's forearm, and is allowed to flow over a dialysing membrane which separates the blood from the dialysing fluid. This membrane is permeable to small molecules such as urea but does not allow passage of protein or cellular elements of the blood. The concentration and nature of the constituents of the dialysing fluid can be altered to meet the needs of the patient. After passage over the membrane, blood is returned to the patient via a convenient vein, thereby allowing continuous clearing of toxic wastes.

This procedure requires about six hours per session and must be carried out three times per week if health is to be maintained. Metabolic and endocrine functions are not assumed by the kidney machine.

Renal transplantation

The actual transplantation of the donor kidney is carried out with predictable success, but the difficulties in assuring an adequate supply of donor kidneys, coupled with immunological rejection remain obstacles in the long term success of this treatment method. Even in the face of these problems, however, kidney transplantation is the most successful major organ graft being performed at present.

DENTAL CONSIDERATIONS

Prior to carrying out dental treatment for patients on chronic dialysis and for renal transplant recipients, consultation with the patient's physician is mandatory.

Timing of dental treatment

Patients who are undergoing hemodialysis are given heparin to prevent thrombus formation while the patient's blood is in the dialyser. Heparin has a short duration of action (2-4 hrs); and, therefore, dental treatment can be carried out safely on the day following dialysis when there is no danger of prolonged bleeding due to presence of the anticoagulant.

Clinical and radiographic findings

Pallor of the oral mucosa is frequently observed in patients on hemodialysis and is related to anemia, the etiology of which is discussed below.

Radiographic findings include loss of lamina dura and radiolucent cyst-like lesions of the maxilla and mandible. These lesions are probably related to excessive parathyroid hormone levels consequent to secondary hyperparathyroidism.

Hepatitis B

Hepatitis B has been a frequent complication of hemodialysis in many centres, and special precautions are necessary when providing dental care for dialysis patients to prevent transmission of the disease to dental personnel.⁶

Little evidence exists to substantiate the occurrence of infection other than by direct inoculation into the recipient's blood stream.⁷ One recent study failed to demonstrate the presence of hepatitis B antigen in aerosol created by the dentist's drill during work on patients whose blood was positive for hepatitis B antigen.⁸

Keystone et al⁹ recommend that instruments which have been used to treat hepatitis B carriers should be autoclaved. They disagree, however, with the recommendation that hepatitis B carriers be treated under virtual operating room conditions. They base their opinion on the paucity of evidence which implicates fomite transmission and they suggest "that dentists can adequately protect themselves from acquiring hepatitis B virus by simple techniques: wearing gloves, a mask, and perhaps glasses when working on known hepatitis B carriers or those patients at high risk of infection." Withers¹⁰ states "the wearing of gloves, a mask and protective eyewear will almost totally protect one from contracting the disease."

With regard to the possibility of transmission of hepatitis B to other patients in the dental practice, Withers recommends that "all instruments should be sterilized and all environmental surfaces should be appropriately treated." In a recent publication of the U.S. Department of Health Education and Welfare,¹¹ it is stated that "thorough cleaning of environmental surfaces with detergents is the most important step in reducing the amount of virus on those surfaces." This same report points out that there is no firm evidence of the transmission of hepatitis B from a carrier patient to a subsequent patient in the dental operatory.

It is advisable for dentists and related personnel to have a serum test performed which can identify hepatitis B antibody, because those who are positive for antibody are immune to infection.¹²

Hypertension

Hypertension in patients with chronic renal failure is common. Dentists should use vasoconstrictors with care. Anxious patients can benefit from pre-treatment sedation with sodium pentobarbital or diazepam.

Hypertension in these patients is often volume dependent and may be associated with congestive heart failure.¹³

Digitalis is frequently used to treat this problem, and the dentist should know that digitalis in the presence of potassium imbalance is the perfect setting for the development of serious cardiac dysrhythmias.

Anemia

Chronic renal failure is known to depress the stimulation of erythropoietin, thereby decreasing both formation and rate of maturation of red blood cells. The severity of this anemia demands close co-operation among physician, anesthesiologist, and dentist if general anesthesia is deemed necessary to accomplish dental treatment.

Platelet dysfunction

Platelet dysfunction results from uremia,¹⁴ and prevention of consequent bleeding following dental surgical treatment can usually be achieved using meticulous local measures which include atraumatic technique, the use of hemostatic sponges and proper home care instructions.

In the case of the patient who has undergone renal transplantation, in addition to the precautions mentioned above, there are the following considerations:

Immunosuppression

Transplant rejection is a hazard of kidney replacement. Almost all renal transplant recipients require lifelong immunosuppressive therapy. The principal immunosuppressive agent is azathioprine, a 6-mercaptopurine derivative, which can cause serious leukopenia unless the dose is monitored closely. Glucocorticoids such as prednisone and methylprednisolone are administered as adjunctive immunosuppressive agents.

Immunosuppression creates the potential for serious sepsis because naturally induced protective humoral and cellular immunity mechanisms are depressed, thus exposing the patients to greater risk from pathogenic microorganisms. For this reason, renal transplant recipients should receive bacterial chemoprophylaxis when dental treatment which can produce bacteremia is performed. A prudent antibiotic regime is one which is similar to that recommended in the Guidelines of the American Heart Association for patients with rheumatic valvular heart disease.¹⁵ The dentist must also be ever wary of mycotic and viral super-infections in the immunosuppressed patient, such as oral candidiasis or Herpes simplex virus stomatitis, either of which can progress to serious widespread local lesions, or more rarely, to generalized systemic disease.¹⁶

Normally, steroids are given orally; but in the case where dental or oral surgical procedures are so extensive as to preclude the oral route, parenteral steroid administration is necessary to avoid the problems associated with acute steroid withdrawal.

SUMMARY

A brief review of renal physiology and pathophysiology has been presented.

For the patient on chronic hemodialysis, important clinical considerations include timing of the dental treatment, the presence of hypertension and anemia, and the possibilities of hepatitis B and prolonged bleeding. In the case of the renal transplant recipient, bacterial chemoprophylaxis and prevention of acute steroid withdrawal are mandatory.

An understanding of some of the fundamental treatment methods and medications allows the dentist to communicate more knowledgeably with both patient and physician. Dentists are urged to consult with the patient's physician to aid in the delivery of safe, effective dental care.

Dr. Laba is a resident in Oral Surgery, Victoria General Hospital; **Dr. Hinrichsen** is associate professor, Orthodontics, Faculty of dentistry, Dalhousie University, Halifax, N.S.; **Dr. Precious** is associate professor, Oral and Maxillofacial Surgery, Dalhousie University, Halifax, N.S. Requests for reprints should be directed to Dr. Precious.

REFERENCES

- 1 Guttman, R.D. Renal transplantation. *N Engl J Med* 301:975, 1979.
- 2 Kelman, G.R. *Physiology: a clinical approach*. Ed. 2. London, Livingstone, 1975.
- 3 de Wardener, H.E. *The kidney: an outline of normal and abnormal structure and function*. Ed. 4. Edinburgh, Churchill-Livinstone, 1973.
- 4 Cohen, A.D. Personal communication, 1980.
- 5 Manis, T. and Friedman, E.A. Dialytic therapy for irreversible uremia. *N Engl J Med* 301:1260, 1979.
- 6 Donaldson, D. Homologous serum hepatitis and dental treatment of renal dialysis and kidney transplant patients. *Brit dent J* 132:391, 1972.
- 7 Maynard, J.E. Modes of hepatitis B virus transmission. Reprinted by the U.S. Department of Health, Education and Welfare, Public Health Service from hepatitis viruses, 1978.
- 8 Peterson, N.J., Bond, W.W. and Favero, M.S. Air sampling for hepatitis B surface antigen in a dental operatory. *JASA* 99:465, 1979.
- 9 Keystone, J.S. et al. Correspondence with Dr. J.E.H. Miller, Deputy Minister, Department of Health, Province of Nova Scotia, 1979.
- 10 Withers, J.A. Hepatitis: a review of the disease and its significance to dentistry. *J Periodont* 51:162, 1980.
- 11 Morbidity and Mortality Weekly Report, Vol 29, January 11, 1980.
- 12 Haldane, E.V. Personal communication, 1980.
- 13 Stuart, F.P., Simonian, S.J. and Hill, J.L. Special considerations in surgical management of patients on haemodialysis and after successful kidney transplantation. *Surg Clin N Amer* 56: No. 1, Feb. 1976.
- 14 Bottomley, W.K., Cioffi, K.F. and Martin, A.S. Dental management of the patient treated by renal transplantation. Pre-operative and postoperative considerations. *J Amer Dent Ass* 85:1330, 1972.
- 15 Reports of Councils and Bureaus: Prevention of bacterial endocarditis: a committee report of the American Heart Association. *J Amer Dent Ass* 95:601, 1877.
- 16 Westbrook, S.D.F. Dental management of patients receiving hemodialysis and kidney transplants. *J Amer Dent Ass* 96:464, 1978.

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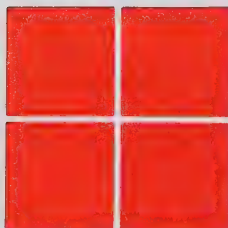
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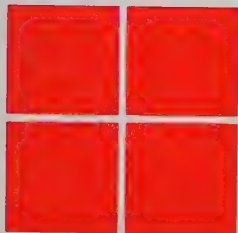
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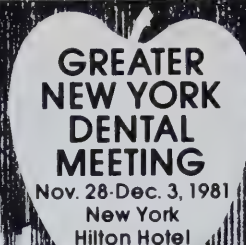
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American Academy of Periodontology 67th Annual Meeting, Sheraton Centre, Toronto, Ontario, October 21-24, 1981. Contact: Office of the Secretary, American Academy of Periodontology, 211 E. Chicago Ave., Chicago, Ill. 60611, U.S.A.

The Canadian Society of Oral & Maxillo-facial Surgeons 28th Annual Convention, Chateau Laurier Hotel, Ottawa, Ontario, October 22-25, 1981. Contact: Dr. Samuel P. Kucey, 239 Argyle, Ottawa, Ont. K2P 1B8, Tel: (613) 232-4203.

November/novembre

Toronto Academy of Dentistry Annual Winter Clinic, Royal York Hotel, Toronto, Ontario, November 26, 1981. Contact: Academy of Dentistry, 234 St. George Street, Toronto, Ont. M5R 2P2.

December/Décembre

The Royal College of Dentists of Canada, Part II Examinations, University of Toronto, Faculty of Dentistry, December 4-5, 1981. Contact: Dr. John E. Speck, Registrar, Royal College of Dentists of Canada, 170 St. George Street, Suite 614, Toronto, Ont. M5R 2M8.

International

October/octobre

21st Annual Meeting of the American Association of Hospital Dentists, Bellevue-Stratford Hotel, Philadelphia, Pennsylvania, October 2-4, 1981. Contact: Ms. C.M. Truclear, Office of Continuing Education, Medical College of Pennsylvania, 3300 Henry Avenue, Philadelphia, Pa. 19129, U.S.A. Phone: (215) 842-7127.

The American Academy of Implant Dentistry's 30th Annual Scientific Program, Kansas City, Missouri, October 19-24, 1981. Contact: Mr. John P. Winiewicz, Executive Secretary, The American Academy of Implant Dentistry, 515 Washington Street, Abington, Massachusetts 02351, U.S.A. Phone: (617) 878-7990.

The 38th Annual Meeting of The Institute of Oral Biology, The Spa Hotel, Palm Springs, California, October 30-November 3, 1981. Contact: Executive Secretary, P.O. Box 481, South Laguna, CA 92677, U.S.A.

November/novembre

New York College of Dentistry's new one month course "Current Concepts In American Dentistry", New York University Dental Centre, 421 First Avenue, New York, New York 10010.

Asian College of Dental Surgeons, Sydney, Australia, November 9-12, 1981. Contact: Hon. Secretary, Royal Australasian College of Dental Surgeons, Inc., 229 Macquarie Street, Sydney, NSW 2000, Australia.

Swedental Dental Congress and Trade Fair, Stockholm, Sweden, November 18-21, 1981. Contact: A.C. Nackstad, Svenska Tandlakare-Sallaskapet, Nybrogatan 53, 11440 Stockholm, Sweden.

The XVI International Congress of the Mexican Dental Association, city of Mexico, November 19-22, 1981. Contact: Dr. Luis Quiroz, Secretary General, XVI International Congress of the ADM, Cerrada de Popocatepetl 51-A, Mexico 13, D.F., Mexico.

1982 -

The East Coast District Society Annual Winter Meeting, Fontainebleau Hilton Hotel, Miami Beach, Florida, January 28-30, 1982. Contact: East Coast District Dental Society, 420 South Dixie Highway, Suite 2-E, Coral Gables, FL 33146, U.S.A.

1982 World's Fair, Knoxville, Tennessee, May 1 — October 31, 1982. Contact: Anne Russell, Director of Special Affairs, City of Knoxville, P.O. Box 1631, Knoxville, Tennessee 37901, U.S.A. Phone: (615) 521-2549.

Australian Dental Association, 23rd Dental Congress, Perth, Australia, May 2-7, 1982. Contact: Australian Dental Association, 23rd Dental Congress, P.O. Box 29, Parkville, Victoria, Australia, 3052.

College of Dental Surgeons of British Columbia Convention, Hotel Vancouver, Vancouver, B.C., May 4-7, 1982. Contact: Venue West Executive Services Ltd., 1704 1200 Alberni Street, Vancouver, B.C. V6E 1A6.

The Dental Association of South Africa, Diamond Jubilee Congress, Durban, South Africa, May 10-14, 1982. Contact: Dr. Helmut Heydt, Executive Secretary, Dental Association of South Africa, Private Bay One, Houghton, 2041, South Africa.

The International Congress of Oral Implantologists World Congress VI for Oral Implantology, Hyatt Regency Hotel, Maui, Hawaii, May 21-23, 1982. Contact: Mr. Clifford J. Kirschner, Executive Director, The International Congress of Oral Implantologists, P.O. Box 2277, Grand Central Station, New York, N.Y. 10163, U.S.A.

Journées Dentaires du Québec, Queen Elizabeth Hotel, Montreal, Quebec, May 23-27, 1982. Contact: Dr. Morton R. Lang, Journées Dentaires du Québec, 801 Sherbrooke Street East, Suite 303, Montreal, Que. H2L 1K7. Tel. (514) 481-0397.

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- 630 **Manpower crisis**
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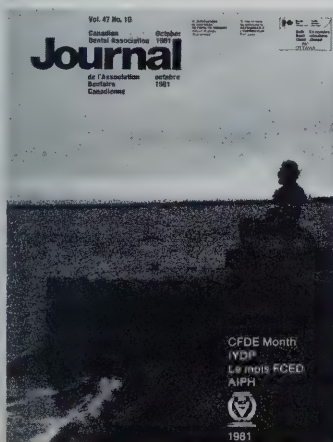
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The CDA Journal reaches many countries, institutions and individuals around the world.

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"A valuable source of current practical clinically oriented information . . ."
- Essentials of Clinical Dental Assisting**
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CFDE Month
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1981

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Journal

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1981

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Le Journal de l'ADC est diffusé dans un grand nombre de pays et compte des lecteurs partout dans le monde.

Scientifique

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- 636 **Le débat sur la publicité**
Le dentiste devrait-il être autorisé à faire sa propre réclame? Les opinions varient. Dans certaines provinces, on croit la publicité inévitable; ailleurs, on s'y oppose avec fermeté.

- 620, 628 **Les programmes agréés**
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- 640 **La dentisterie commerciale, source d'inquiétude**
Cette notion nouvelle ne semble pas soulever beaucoup d'enthousiasme dans la profession. Le point de vue des associations provinciales.

- 639 **Le mois de l'éducation dentaire**
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- 642 **Le problème de la main-d'oeuvre**
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La direction du Journal ne partage pas nécessairement les opinions qu'expriment ses collaborateurs à moins que l'Association Dentaire Canadienne ne les ait adoptées officiellement.

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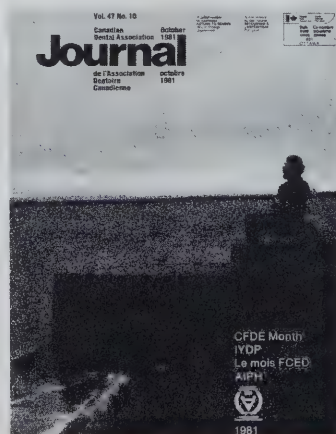
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Le mois FCED
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1981

I NTERNATIONAL YEAR OF DISABLED PERSONS

Symposium articles begin on page 643

When the majority of able-bodied people see individuals who are less fortunate because of a physical or mental disability which prevents them from keeping pace with their peer group, the usual reaction has been to shrink back, perhaps filled with emotions of pity, sympathy or indifference.

Physical and/or mental disabilities know no bounds; they are not predetermined by age, sex, race, color or creed, social, educational or economic background. In short, no one is immune. To this group of people society has designated the adjective 'handicapped', a word which throughout time has continuously eliminated a multitude of opportunities for many handicapped but capable individuals.

At this time one must ask, "why the sudden international interest in the disabled?" Perhaps the wars of the past 40 years which affected so many young people have focused our attention on rehabilitation in its broadest aspect; or is it a fact that we as a society have matured to a level of understanding and acceptance that all men are born neither perfect nor equal? I believe that it is a combination of both of the foregoing in addition to the realization that these disabled persons are also citizens and therefore have rights, and that they are now expressing themselves as individuals, through organizations and through the media. With the present emphasis on the decentralization of institutions, home care and integration of the disabled into the community, society can no longer assume that all the needs of the disabled will be met

in an institutional environment, which, in fact, heretofore had removed from it the obligation to look after this segment of the population.

We in dentistry are both citizens and members of a health profession. We will be called on as never before to meet the increased demand for dental services for the disabled. To do this with efficiency and competence, educational programs at every level of learning, i.e. undergraduate, graduate and post graduate, as well as continuing education levels, must be initiated or expanded, and must also receive funding.

The Royal College of Dentists of Canada is pleased to be given the opportunity to present this Symposium on Dentistry for the Disabled to the dental profession. It is our hope that in so doing we will help you, the dental practitioner, bring the International Year of the Disabled down to the local level where you can participate in a program which will, in turn, help the disabled living in your community assume a more productive role and live a life filled with increased self-worth, dignity and security.

Prime Minister Trudeau said recently that Terry Fox did more than any one person in recent history to unite the people of Canada. Let this year, 1981, The Year of Disabled Persons, help unite our profession to better serve mankind whatever be his status in life, in both the quantity and quality of dental care.

*Dr. Norman Levine
President
The Royal College of Dentists
of Canada*

1981

L'ANNÉE INTERNATIONALE DES HANDICAPÉS

La présence de personnes qui ont l'infortune d'avoir une incapacité physique ou mentale les empêchant de suivre les autres incite ordinairement la plupart de ceux qui sont en pleine possession de leurs moyens à se dérober, peut-être par pitié ou sympathie, ou encore par indifférence.

Physique ou mentale, l'incapacité n'a pas de limites: elle n'est déterminée d'avance ni par l'âge, le sexe ou la race, ni par les opinions ou les croyances, ni par le degré d'instruction, ni par le milieu social ou économique. Bref, personne n'en est immunisé. Et pour désigner ceux qui en sont atteints, la société utilise le vocable "handicapé", un mot qui a de tout temps fermé un grand nombre de portes à beaucoup de personnes qui, malgré leur handicap, avaient certaines capacités.

Profitions de l'occasion pour nous demander: pourquoi cet intérêt soudain envers les handicapés dans le monde? C'est peut-être à cause des guerres des 40 dernières années qui ont touché tant de jeunes gens et qui nous ont amenés à nous préoccuper de la réhabilitation dans le sens le plus large du mot; c'est peut-être aussi que notre société a acquis plus de maturité et qu'elle peut maintenant comprendre et accepter que les hommes ne naissent pas parfaits ni égaux? Je crois que ces deux perceptions y sont pour quelque chose, outre le fait que ceux qui sont atteints d'incapacité sont aussi des citoyens, qu'ils ont des droits et qu'ils peuvent s'exprimer personnellement, en groupes ou par les médias de communication. A cause de l'importance qu'on attache de nos jours à la décentralisation des institutions, aux soins à domicile et à l'intégration des handicapés à la collectivité, la société ne peut plus pré-

sumer que le milieu institutionnel répond à tous les besoins des handicapés et la dégage comme auparavant de ses obligations envers ce segment de la population.

A titre de dentistes, nous sommes à la fois citoyens et professionnels de la santé. Nous serons appelés comme jamais auparavant à prodiguer nos soins aux handicapés. Et pour nous acquitter de cette tâche avec compétence et efficacité, il nous faut mettre sur pied ou étendre des programmes de formation à tous les niveaux, universitaires ou post-universitaires, comme dans le cadre de la formation continue, ainsi que veiller à leur financement.

Le Collège royal des dentistes du Canada est heureux d'offrir à la profession dentaire ce symposium sur les soins dentaires aux handicapés. Il espère ainsi vous aider, vous les praticiens, à ramifier au niveau local la campagne de l'Année internationale des handicapés, par des activités auxquelles vous participerez et qui aideront les handicapés de votre localité à jouer un rôle plus fécond et à valoriser leur propre vie dans la dignité et la sécurité.

Le premier ministre Trudeau disait récemment que Terry Fox avait, au cours des dernières années, fait plus que tout autre pour promouvoir l'unité du peuple canadien. Puisse cette année 1981, l'Année internationale des handicapés, contribuer à l'unité de notre profession et nous aider à mieux servir nos semblables, quelle que soit leur condition, en ce qui a trait à la quantité et à la qualité des soins dentaires.

*Le Dr Norman Levine,
Président du Collège royal
des dentistes du Canada*

Aqua-fresh is preferred

in research tests amongst women*

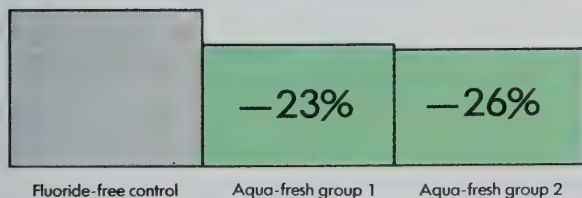


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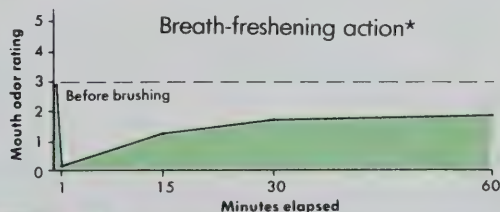


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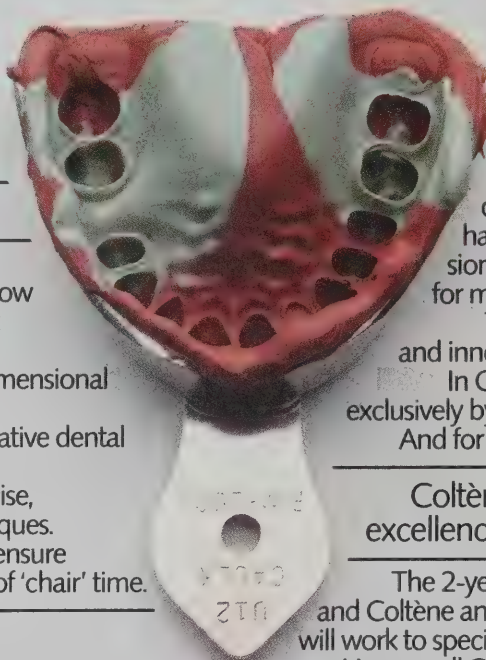
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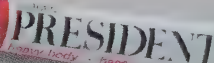
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PRESIDENT

Dental research money available in Ontario

More than a quarter of a million dollars has been set aside by the Ontario Ministry of Health for dental research.

The \$274,644 in dental grants is part of the over-all \$4.1 million the ministry recently awarded to 128 projects in the first of two health research grant competitions for 1981-82.

Dr. G.A. Zarb and Dr. J.M. Symington of the Department of Prosthodontics, University of Toronto received the largest grant for dental research.

The two dentists have been awarded \$54,075 for their program to treat edentulous patients with fixed dental bridges retained by osseointegrated implants.

Other dental research awards include:

- \$5,000 for Dr. N.A. Farrell of the Ontario Society of Public Health Dentists for a workshop to develop evaluative skills for dental directors in Ontario health units.
- \$27,343 for Drs. K.A. Galil, I. Scholfield and G.Z. Wright of the University of Western Ontario for application of tissue adhesives in oral surgery.
- \$20,350 for Drs. D.R. Gratton, R.E. Jordan and M. Suzuki of the University of Western Ontario for a clinical study of conservative castcatch fixed anterior prosthese.
- \$40,000 for Drs. L.N. Johnson and R.E. Jordan of the University of Western Ontario for the Study of physical properties of dental materials.
- \$11,195 for Drs. L.N. Johnson and P.S. Sills of the University of Western Ontario to test the soft denture liners and tissue conditioners.
- \$21,050 to Drs. R.E. Jordan and M. Suzuki of the University of Western

Ontario to investigate the micro-particle filled resin materials.

- \$11,813 to Drs. M. Suzuki and L.N. Johnson of the University of Western Ontario to study immediate polish of high copper amalgam alloys.
- \$7,660 to Dr. D.W. Lewis of the University of Toronto for phase III of his dental health care services and epidemiology research.
- \$20,000 to Dr. D. McComb of the University of Toronto to compare by clinical trial two new dental

materials with silver amalgam in restoration of posterior teeth.

- \$26,888 to Drs. H.J. Sandham and R.C. Burgess of the University of Toronto to develop streptococcus mutans for the prevention of dental caries.
- \$29,270 to Dr. D.C. Smith of the University of Toronto to evaluate the utility of crystal growth on enamel surfaces as a mechanism of bonding resins to tooth surfaces.

The grants are effective from April 1, 1981 to March 31, 1982.

Continuing education important

In his address to the graduates of the Faculty of Dentistry and School of Dental Hygiene on May 29, president Dr. R.C. Baker reminded the students that the Manitoba Dental Association feels continuing education is important and the MDA has made a moderate amount of continuing education mandatory for re-licensure.

He said the MDA is considering a continuing education bylaw that will make it compulsory to include a certain number of hours in participatory courses in every three-year period.

"The rapidly changing complexities of the practice of dentistry over the next four years will call for modifications to the curriculum of the dental school and will place a great importance on the liaison between the faculty and the association," Dr. Baker said.

The president concluded his remarks with a reminder to graduates that the success of their practices will depend not only on technical ability but their ability to manage an office and to communicate with and motivate people.

CDA Retirement Savings Plan

Unit values of the Canadian Dental Association's Retirement Savings Plan stood as follows on August 31, 1981.

<i>Common Stock Fund</i>	\$52.6154
<i>Fixed Income Fund</i>	\$23.0438
<i>Guaranteed Fund</i>	\$20.8904
<i>Balanced Fund</i>	\$12.0820

Total assets (market value) of the plan were \$31,230,817.

The previous month's figures, as of July 30, 1981, stood as fol-

lows:

<i>Common Stock Fund</i>	\$53.9542
<i>Fixed Income Fund</i>	\$22.8150
<i>Guaranteed Fund</i>	\$20.6079
<i>Balanced Fund</i>	\$12.3471

Total assets (market value) of the plan were \$31,792,205.

For further information write to: Canadian Dental Service Plans Inc., P.O. Box 7500, Station A, Toronto, Ontario M5K 1A0.



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Motrin 400mg tablets

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THE UPJOHN COMPANY OF CANADA
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See prescribing information on page

Motrin (ibuprofen)

Product Information

Action: Ibuprofen has demonstrated anti-inflammatory, analgesic and antipyretic activity in animal studies designed to specifically demonstrate these effects. Ibuprofen has no demonstrable glucocorticoid effect.

Following a single 200 mg dose of ibuprofen in humans, useful blood levels were demonstrable in 45 minutes and still present in six hours but at barely detectable levels. Peak levels occurred at approximately one hour after ingestion. Levels were lower when taken in conjunction with food.

Ibuprofen is rapidly metabolized and eliminated in the urine. The excretion of ibuprofen is virtually complete 24 hours after the last dose. The serum half-life of ibuprofen is 1.8 to 2 hours. There is no evidence of drug accumulation or enzyme induction.

Ibuprofen has been found to be less likely to cause gastrointestinal bleeding in doses usually used than is acetylsalicylic acid.

Clinical trials in man have shown activity of a dose of 1200-1800 mg of ibuprofen daily to be similar to that of 3.6 grams of acetylsalicylic acid daily.

Indications and Clinical Uses: Motrin (ibuprofen) is indicated for the treatment of rheumatoid and osteoarthritis. Motrin is also indicated for the relief of mild to moderate pain, accompanied by inflammation, in conditions such as musculo-skeletal trauma and post-dental extraction. Motrin is also indicated for the relief of pain associated with dysmenorrhea.

Contraindications: Ibuprofen should not be used in patients who have previously exhibited hypersensitivity to it, or in individuals with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to acetylsalicylic acid or other nonsteroidal anti-inflammatory agents. (see WARNINGS).

Ibuprofen should not be used during pregnancy, in nursing mothers or in pediatric patients because its safety under these conditions has not been established.

Warnings: Anaphylactoid reactions have occurred in patients with known A.S.A. hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported in patients receiving ibuprofen. Peptic ulceration, perforation, or severe gastrointestinal bleeding can have a fatal outcome, and although few such reports have been received with ibuprofen, a cause and effect relationship has not been established. Ibuprofen should be given under close supervision to patients with a history of upper gastrointestinal tract disease.

Precautions: Blurred and/or diminished vision, scotomata, and/or changes in colour vision have been reported. If a patient develops such complaints while receiving ibuprofen, the drug should be discontinued and the patient should have an ophthalmologic examination.

Fluid retention and edema have been reported in association with ibuprofen, therefore, the drug should be used with caution in patients with a history of cardiac decompensation or renal disease.

Ibuprofen, like other nonsteroidal anti-inflammatory agents, can inhibit platelet aggregation but the effect is quantitatively less and of shorter duration than that seen with acetylsalicylic acid. Ibuprofen has been shown to prolong bleeding time (but within the normal range) in normal subjects. Because this prolonged bleeding effect may be exaggerated in patients with underlying hemostatic defects, ibuprofen should be used with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients on ibuprofen should be cautioned to report to their physicians signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

When ibuprofen is added to the treatment program of patients who have been on prolonged corticosteroid therapy, and it is decided to discontinue this therapy, the corticosteroid should be tapered slowly to avoid exacerbation of disease or adrenal insufficiency.

Aseptic meningitis has been reported in connection with ibuprofen therapy in patients with systemic lupus erythematosus. Such patients may also develop hypersensitivity reactions to ibuprofen such as fever, rash or abnormal liver function more often than those with other disorders. Caution should therefore be exercised when considering ibuprofen therapy for patients with systemic lupus erythematosus.

Drug Interactions

Coumarin-type anticoagulants - Several short-term controlled studies failed to show that ibuprofen significantly affected prothrombin times or a variety of other clotting factors when administered to individuals on coumarin-type anticoagulants. However, because bleeding has been reported when ibuprofen and other nonsteroidal anti-inflammatory agents have been administered to patients on coumarin-type anticoagulants, the physician should be cautious when administering ibuprofen to patients on anticoagulants.

A.S.A.: Animal studies show that A.S.A. given with nonsteroidal anti-inflammatory agents including ibuprofen yields a net decrease in anti-inflammatory activity with lowered blood levels of the non-A.S.A. drug. Single dose bioavailability studies in normal volunteers have failed to show an effect of A.S.A. on ibuprofen blood levels. Correlative clinical studies have not been done.

Adverse Reactions: The following adverse reactions have been noted in patients treated with ibuprofen:

Note: Reactions listed below under Causal Relationship Unknown are those which occurred under circumstances where a causal relationship could not be established. However, in these rarely reported events, the possibility of a relationship to ibuprofen cannot be excluded.

Gastrointestinal: The adverse reactions most frequently seen with ibuprofen therapy involve the gastrointestinal system.

Incidence 3 to 9%: nausea, epigastric pain, heartburn
Incidence 1 to 3%: diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the gastrointestinal tract (bloating or flatulence).

Incidence less than 1%: gastric or duodenal ulcer with bleeding and/or perforation, gastrointestinal hemorrhage, melena, hepatitis, jaundice, abnormal liver function (SGOT, serum bilirubin and alkaline phosphatase).

Central Nervous System

Incidence 3 to 9%: dizziness

Incidence 1 to 3%: headache, nervousness

Incidence less than 1%: depression, insomnia

Causal relationship unknown: paresthesias, hallucinations, dream abnormalities.

Dermatologic

Incidence 3 to 9%: rash (including maculopapular type)
Incidence 1 to 3%: pruritis

Incidence less than 1%: vesiculobullous eruptions, urticaria, erythema multiforme

Causal relationship unknown: alopecia, Stevens-Johnson syndrome.

Special Senses

Incidence 1 to 3%: tinnitus

Incidence less than 1%: amblyopia (blurred and/or diminished vision), scotomata and/or changes in color vision). Any patient with eye complaints during ibuprofen therapy should have an ophthalmologic examination (see PRECAUTIONS).

Causal relationship unknown: conjunctivitis, diplopia, optic neuritis.

Metabolic

Incidence 1 to 3%: decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

Hematologic

Incidence less than 1%: leukopenia and decreases in hemoglobin and hematocrit

Causal relationship unknown: hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes (e.g. purpura, epistaxis, hematoma, menorrhagia).

Cardiovascular

Incidence less than 1%: congestive heart failure in patients with marginal cardiac function, elevated blood pressure

Causal relationship unknown: arrhythmias (sinus tachycardia, sinus bradycardia, palpitations).

Allergic

Incidence less than 1%: anaphylaxis (see CONTRAINDICATIONS).

Causal relationship unknown: fever, serum sickness, lupus erythematosus syndrome.

Endocrine

Causal relationship unknown: gynecomastia, hypoglycemic reaction.

Renal

Causal relationship unknown: decreased creatinine clearance, polyuria, azotemia.

Symptoms and Treatment of Overdosage: A nineteen month old child weighing 12 kg ingested from 2800 to 4000 mg and presented with apnea, cyanosis and responded only to painful stimuli. Oxygen and parenteral fluids were given and at 12 hours she appeared completely recovered. Two other children (10 kg each) ingested 1200 mg of ibuprofen each and there were no signs of acute intoxication or late sequelae. A 19 year old male who had ingested 8000 mg of ibuprofen reported dizziness, and nystagmus was noted. He recovered with no reported sequelae after parenteral hydration and three days' bed rest.

In cases of acute overdosage, the stomach should be emptied by vomiting or lavage, though little drug will likely be recovered if more than an hour has elapsed since ingestion. Because the drug is acidic and is excreted in the urine, it is theoretically beneficial to administer alkali and induce diuresis.

Dosage and Administration: Rheumatoid arthritis and osteoarthritis: The initial daily dosage in adults is 1200 mg divided into 3 or 4 equal doses. Depending on the therapeutic response, the dose may be adjusted downward or upward. The daily dosage should not exceed 2400 mg.

Maintenance therapy, once maximum response is obtained, will range from 800 to 1200 mg per day.

Mild to moderate pain associated with inflammation, dysmenorrhea: 400 mg repeated as required every 4 to 6 hours. The daily dosage should not exceed 2400 mg.

Children: Due to the lack of clinical experience, ibuprofen is not indicated for use in children under 12 years of age.

Supplied: 200 mg (yellow), 300 mg (white), 400 mg (orange) sugar-coated tablets and 600 mg (peach) film-coated tablets in bottles of 100 and 1000.

Product monograph available on request.

7910 REGISTERED TRADEMARK MOTRIN CE 1542 1A

Upjohn

THE UPJOHN COMPANY OF CANADA
865 YORK MILLS ROAD
DON MILLS, ONTARIO



Obituaries/ Nécrologies

MCDUGALL, Allan Fraser, August 5, 1981. Dr. McDougall was born in 1922 and graduated from the Faculty of Dentistry, University of Toronto in 1951.

PEDLAR, Frederick Gordon, July 4, 1981. Dr. Pedlar was born in 1912 in Oxbow, Sask. He received his early education in that town and later attended the University of Saskatchewan, where he took his Bachelor of Science degree. Dr. Pedlar graduated in 1941 from the Faculty of Dentistry, University of Alberta and practised from 1947 to 1973 in Olds, Alta. In 1962, he served as president of Central Alberta Dental Society.

Dental Reserves

The Dental Reserves of the Canadian Armed Forces have announced there are dental officer vacancies in Toronto, Hamilton, London, Sault Ste. Marie and Windsor.

These vacancies are open to former dental corps officers, new dental graduates and any dentist with previous military service.

For more information, those interested should contact Major Don Bell, Suite 205, 356 Woodroffe Avenue, Ottawa, K2A 3V6; (613) 722-3000.

Advertising still a controversial issue for dentists

Advertising is not a four-letter word.

But to many dentists, it holds all the significance of an obscene slogan.

For them, advertising spells discount and price cutting and the death of professionalism.

Yet at the same time, there are voices — no longer in the wilderness — crying out that provincial dental licensing bodies should allow individual dentists to advertise.

Can this request of permitting professionals to openly advertise — a move which is recommended by the Quebec government, is being watched closely by the federal government, and is now being challenged in the Supreme Court of Canada — can this request be prevented from becoming a reality?

Perhaps more important, should it be?

Provincial dental associations facing manpower problems have been feeling a slight pressure from some of their members, albeit a small minority, that advertising may ease the pains of a profession growing beyond its patient load.

Nevertheless, there are no immediate changes predicted. Although most executive directors, registrars or dental association presidents interviewed by the Journal feel advertising is inevitable in the long run, others stand firmly opposed.

However, all agree that advertising will never be accepted unless a great deal more of their members demand it.

Yet is advertising illegal? Do professional associations have the right to tell their members how, when and what they can advertise?

According to the federal ministry of Consumer and Corporate Affairs, there are a lot of gray areas. In 1976, changes to the Combines Investigation Act brought service industries

under the same jurisdiction of the act as were trade and commerce industries. This made them subject to the same charges, convictions and punishments for such illegal practices as price maintenance, conspiracy and monopolies.

But in the case of professional associations, jurisprudence has shown that the provincial statutes which give the association the right to regulate their profession take precedence. Therefore, theoretically, the powers outlined in provincial dental acts exclude application of the Combines Investigation Act.

However, in reality, things are not that simple.

Wayne Critchley, of the Services Branch of the federal Bureau of Competition Policy, says dental acts across Canada are far from being uniform in their powers. Many do not state specifically that the associations or licensing bodies have the right to restrict advertising or set fee guides. And in Quebec, one of the few provinces whose act does specifically state regulation powers, the Office des Professions du Quebec (a government supervisory board) has recommended that these powers be revoked. It would like to see advertising permitted and the removal of fee guides.

Bill Lindsay, director of the Services Branch, smudges the fine lines even further.

He says that although a provincial dental act may empower licensing bodies to determine and regulate unprofessional conduct, there remains a lot of room for interpretation.

For example, the licensing bodies may view advertising as unbecoming, but his ministry may see it in another light. The same applies for suggested fee guides. Mr. Lindsay says if the guide is in fact adhered to by most dentists and if there is pressure for the dentist to follow it, is it not then a fee

schedule? In both cases, the federal government could view the provincial power as restrictive.

These very arguments regarding advertising have been placed before the Supreme Court of Canada. A British Columbia lawyer is challenging his law society on its right to restrict advertising. Although the case was heard in late May, a decision has still not come down. If the lawyer is successful, the consequences are bound to be felt in other professions — including dentistry.

The entire question smacks of *deja-vu* in light of what has occurred to the south. In 1977, an Arizona dentist successfully challenged advertising restrictions on his profession in the Supreme Court of the United States. The result was the American Dental Association permitted its members to advertise.

Will the same happen here?

Dr. Claude Doughty, president of the Royal College of Dental Surgeons of Ontario, says Canada is not the United States.

Dr. Claude Chicoine, president and executive director of the Association des Chirugiens Dentistes du Quebec, says he is confident his association will successfully prevent advertising in Quebec.

Dr. Jack Thompson, executive director and registrar of the New Brunswick Dental Association, predicts advertising will not arrive until the next century.

Both Dr. George Peacock, of the College of Dental Surgeons of Saskatchewan, and Mr. Ken Croft, of the B.C. College, feel that even if advertising does come, peer pressure, or "peer advice" as Dr. Peacock prefers to put it, will stop the majority of dentists from advertising.

Other dental representatives polled by the Journal feel their members just aren't interested right now.

bringing conflicting views on acceptability

Is dental advertising an issue then?

According to Mr. Don Pamenter, executive director of the Nova Scotia Dental Association, the manpower situation is the key.

"If the situation worsens, more and more dentists will be trying to treat the same number of patients," he says. "There's got to be some method of attracting them to your office."

Yet despite the fact that over-proliferation of dentists "is becoming a problem" in Nova Scotia's urban centres, Mr. Pamenter says he is not aware of any requests from the members that they be allowed to advertise.

Other Atlantic provinces are having much the same experience.

Dr. Toby Gushue, of the Newfoundland Dental Association, and Dr. Ray Wenn, of the P.E.I. Association, both report they have had no inquiries regarding advertising. In New Brunswick, Dr. Thompson says there have been some inquiries, but the association simply explains that any advertising outside the usual business card format for a new practice, change in hours, or new associates, is not allowed.

Yet, it can't help but be noted that for the most part, the manpower situation in the Maritimes is different from the rest of Canada. Dr. Gushue says some rural areas in Newfoundland are still "desperately" short of dentists, while Dr. Thompson says dentists are gaining in his province, but there is no cause at all for alarm. In P.E.I., Dr. Wenn also says there is no manpower problem although the island appears to be at its saturation point right now.

Dr. Claude Doughty, of Ontario, probably wishes he could say "no problem" as well, but the RCDS is fielding requests for advertising from a "small minority" of members.

Dr. Doughty admits in Ontario there have been some slight breaks by

members of advertising regulations and that there seem to be more contraventions now than a few years ago. One dentist has even launched his own challenge of the regulations and his case is now in the appeals stage of the provincial courts.

However, despite the increase of contraventions and complaints, Dr. Doughty is convinced Canada will not follow the example of the United States.

"There is definitely no groundswell asking for advertising," he says. For every one guy who breaks the rules, 20 other dentists are up in arms and saying 'nail him.'

"The manpower situation is putting more heat on — that's part of the problem. But the manpower is having more impact on the older, established dental practice. Those guys out there are the ones feeling the heat. However, at the same time, they're the ones who are more conservative and who don't want advertising.

"It's the younger dentists who are asking for it. It's the ones who haven't yet grasped our concept of professionalism. They think dentistry is all business for profit."

Dr. Claude Chicoine is another strong opponent of advertising. His association is fighting the 1977 report of the Office des Professions which calls for advertising restrictions to be lifted.

For Dr. Chicoine, advertising is the first step along the road toward capitation, closed panels and retail dentistry. And as he sees it, the end of that road can only mean price wars, dentists working against other dentists, and a decline in quality.

Dr. Chicoine believes that by making Quebec dentists aware of the long range problems of advertising, it can be kept out of the province.

"We give information to dentists about the benefits of solidarity and

unity," he says. "We make dentists aware of what could happen to them if they end up working against their classmates. I'm confident we'll be successful."

In the Western provinces, the situation changes slightly.

Dr. Bob Baker, president of the Manitoba Dental Association, says a year and a half ago he was worried that the association might not be able to "keep the lid" on advertising.

However, since then, things have changed. Manitoba dentists seem to be busier and Dr. Baker attributes this to the increase of dental insurance plans in the province. Also, the association is considering becoming involved in institutional advertising which it hopes will ease any problem with patient shortages.

On the other hand, Saskatchewan approaches the issue of advertising in an entirely different manner.

Although there has been no real demand for advertising yet, Dr. George Peacock says the College permits it according to the Combines Investigation Act. That means the College provides guidelines suggesting advertising should be presented in the traditional business card manner, but any thing outside of this is not strictly prohibited. Yet at the same time, advertising cannot claim superiority, be inaccurate or misleading, and cannot bring the profession into disrepute.

Dr. Peacock says there have only been a few isolated cases in remote rural areas of dentists stepping outside the guidelines. His members appear to be content with the traditional advertising methods. A shortage of patients is not a "significant" issue in Saskatchewan right now. Dr. Peacock adds that even if an individual dentist chooses to advertise in a non-traditional way, other dentists in the area would probably persuade

him or her that it may not be the right thing to do for the profession.

Ken Croft of British Columbia agrees, as does Dr. Bruno Martinello of the Alberta Dental Association. Both men says advertising is not an issue in their provinces and Dr. Martinello goes as far as to say that even if it was allowed, he feels a vast majority of the dentists would choose not to advertise. He adds that there is only the occasional request for advertising and any breaks in regulation usually arise out of ignorance.

In British Columbia, a province which is facing a manpower problem, the B.C. College has recently rewritten its Dental Act so the power which allows the College to set a fee guide is specifically covered. The amended Act is now before the provincial government.

However, advertising guidelines are only contained in the College's Code of Ethics. Mr. Croft says the College isn't overly worried about this because it has prosecuted successfully in the past using the Code of Ethics.

All licensing bodies across the country have recourses, such as disciplinary committees, if a dentist oversteps the advertising bounds. But in most cases, it appears that a simple discussion with the offending dentist usually results in the desired action.

As long as the majority of Canadian dentists continue to oppose advertising, dental associations will also continue to frown on it. Those who want it must be prepared to risk the ire of their colleagues and probably long and expensive court proceedings.

However, whether threat or bonus, the issue of advertising will not go away. Too many dentists are becoming worried about lack of patients, increasing operational costs and decreasing income. Competition may not be the solution, but some dentists are wondering — what is?

DENTAL AND DENTAL AUXILIARY PROGRAMS ACCREDITED BY THE CANADIAN DENTAL ASSOCIATION 1981

DENTAL UNDERGRADUATE PROGRAMS

University of British Columbia
University of Alberta
University of Saskatchewan
University of Manitoba
University of Western Ontario
University of Toronto
Université de Montréal
McGill University
Université Laval
Dalhousie University

DENTAL SPECIALTY PROGRAMS

Oral Pathology

University of Toronto
University of Western Ontario

Oral Surgery

Dalhousie University
McGill University
University of Toronto
University of Manitoba
Université Laval

Orthodontics

Université de Montréal
University of Toronto
University of Western Ontario
University of Manitoba
University of Alberta

Paedodontics

Université de Montréal
University of Toronto

Periodontics

University of Toronto
University of Manitoba
University of British Columbia
Dalhousie University

DENTAL HYGIENE PROGRAMS

University Programs:

University of British Columbia
University of Alberta
University of Manitoba
Dalhousie University

Community College Programs:

Algonquin College, Ottawa
Canadian Forces, Borden,
Ontario

Collège de Maisonneuve,
Montreal
Collège Regional Bourgchemin,
St. Hyacinthe, Québec
Edouard Montpetit, Longueuil
Francois-Xavier Garneau,
Québec
George Brown College, Toronto
John Abbott College, Montréal
Seneca College, Toronto
Wascana Institute, Regina

DENTAL ASSISTING PROGRAMS

Algonquin College, Ottawa,
Ontario
Canadore College, North Bay,
Ontario
Canadian Forces, Borden,
Ontario
Confederation College,
Thunder Bay, Ont.
George Brown College, Toronto,
Ontario
Holland College, Charlottetown,
P.E.I.
Keewatin College, The Pas,
Manitoba
Kelsey Institute, Saskatoon,
Sask.
Malaspina College, Nanaimo,
B.C.
New Caledonia, Prince George,
B.C.
Nova Scotia, Inst. of Tech.,
Halifax, N.S.
Northern Alberta Inst. of Tech.,
Edmonton, Alta.
Seneca College, Toronto,
Ontario
Southern Alberta Inst. of Tech.,
Calgary, Alta.
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Red River College, Winnipeg,
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Vancouver Vocational Institute,
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Wascana Institute, Regina

COLGATE INTRODUCES A BREAKTHROUGH IN TOOTHPASTE FORMULATION.

TWO FLUORIDES IN ONE TOOTHPASTE.

New Colgate is the first and only toothpaste in Canada to combine the two fluoride compounds now most widely used to provide superior caries reduction.

In New Colgate, (0.76%) sodium monofluorophosphate and (0.1%) sodium fluoride have been incorporated in a hydrated alumina base. And a 3-year clinical study conducted in England,* confirms that this combination provides superior protection when compared to a single fluoride formula with sodium monofluorophosphate (0.76%).

The clinical results lend support to the recommendation made by a team of experts reporting on the U.S. National Caries Program,** that different combinations of fluorides, bases, etc. should be studied "to determine the combination that is most effective in preventing caries."

In summary, the clinical trial provides evidence that Colgate's combination of fluorides gives superior caries protection. We urge you to recommend the only product that combines two fluorides in one toothpaste.

New Colgate.

*Published by the British Dental Journal, October, 1980.

**Evaluation of the National Institute of Dental Research National Caries Program. Volume 1, November, 1979, Page 56.

CLINICAL ADVANCE!
Colgate  ACTIVE
MFP Fluoride
SYSTEM

"Colgate Toothpaste contains sodium monofluorophosphate and sodium fluoride which are, in our opinion, effective decay preventive agents and are of significant value when used in a conscientiously applied program of oral hygiene and regular professional care."
Canadian Dental Association.

*TM



Pamphlets Brochures



COLORFUL CONTEMPORARY PAMPHLETS

English

	Price	Qty. Req'd.
Dental X-Rays Show Hidden Problems (revised)	\$ 8.00/100	
Care Following Minor Oral Surgery	\$ 8.00/100	
A Smile Worth Guarding (orthodontics)	\$ 8.00/100	
How To Brush Your Teeth	\$ 8.00/100	
Those Important Baby Teeth	\$ 8.00/100	
Do's and Don'ts For Dentures	\$ 8.00/100	
What Your Family Should Know About Dental Plaque	\$ 8.00/100	
Dental Health Guide For Teachers and Parents	\$ 8.00/100	
Four Leaf Clover Of Dental Health	\$ 8.00/100	
Dangerous In Bed (bilingual) — (baby bottle syndrome)	\$ 8.00/100	
Facts Favour Fluoridation	\$10.00/100	
Protect That Mouth! (face and mouth guards)	\$10.00/100	
Save That Tooth — Get To The Root Of The Problem (endodontics)	\$10.00/100	
Eating Properly For Better Dental Health	\$15.00/100	
Prepaid Dental Insurance	\$15.00/100	
Do You Have Periodontal Disease	\$15.00/100	
Do You Smoke? Have Your Mouth Checked	\$15.00/100	
Do It Yourself Oral Hygiene	\$25.00/100	

POSTERS available in: size 9" x 12" price: .25... size — 12" x 18" price .50

FLUORIDATION LEAFLETS (size: 8 1/2" x 11")

Nature's Way To Fight Tooth Decay (English)	\$ 2.40/100
Nature's Way To Fight Tooth Decay/Un moyen naturel de lutter contre la carie dentaire (bilingual)	\$ 3.60/100

CAREER INFORMATION

Choosing A Career... Dentistry	.20 each
Dental Hygiene — A Career With A Future	.08 each

BROCHURES CONTEMPORAINES

MULTICOLORES

Français

	Prix	Qté. Req.
Les radiographies dentaires montrent des problèmes cachés (révisé)	\$ 8.00/100	
Précautions à prendre après une chirurgie buccale mineure	\$ 8.00/100	
Conservez votre sourire (orthodontie)	\$ 8.00/100	
Comment brosser vos dents	\$ 8.00/100	
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Retail practices worrisome to many

Dr. David Maycher says setting up shop in a downtown Winnipeg department store has brought him the success he wanted.

His dental association says it's a situation that can be lived with.

Other dentists are not so sure.

The emerging concept of retail dentistry in this country — its trial attempts in Canadian department stores — is prompting interest from the media and the consumer.

And although an unspoken, uneasy truce has been declared by many in organized dentistry, retail practices have others worried.

Troubles at first

When Dr. Maycher first opened his dental clinic in November, 1980 at The Bay department store, there were problems. As the first dentist in Manitoba to establish a retail practice he achieved a certain notoriety among his colleagues.

Fees were the issue of contention. Manitoba dentists didn't much like the idea of Dr. Maycher posting them outside his waiting room or that they were mentioned in a full-page story in the Winnipeg Free Press.

But since then, matters have been ironed out. Dr. Maycher has moved his fee schedule back inside his waiting room and although he will still give media interviews, he won't outline his fees.

As for his critics, Dr. Maycher chooses not to answer them. He says his philosophy is to lie low and wait until things blow over.

Even when he first opened his clinic, he says he was not terribly apprehensive about the reaction it would receive.

"I didn't really feel there was anything wrong with what I was doing and I did feel that I was doing a lot which was right," he says.

A 1978 graduate from the Faculty of Dentistry, University of Manitoba, Dr. Maycher practised for two years as an associate before striking out on his own.

He saw department store dentistry as a means to develop a practice quickly. He says he has now met that goal.

This past spring he hired three new dental graduates as associates. He also has a full-time hygienist who doubles as a dental nurse. But Dr. Maycher says he's not the only one who's happy with the way things have gone. He says his patients are satisfied too.

"I've been fortunate," he admits. "It could have gone the other way."

Dr. Bob Baker, president of the Manitoba Dental Association, says as long as retail dental operations meet the regulations of the provincial dental act, the association will not intervene.

Yet Dr. Baker admits he feels "nervous" about aspects of retail dentistry, such as advertising, which are often an integral part of the concept.

In Dr. Maycher's case, advertising does not appear to be an issue. He says even if it was eventually permitted by the association, he is doubtful he would use it.

But other Manitoba dentists who could choose to set up retail dental clinics in the future may not follow Dr. Maycher's example.

Dr. Baker describes advertising as a "volatile thing."

"It makes me nervous," he says. "I don't believe the public can assess how good a dentist is through advertising. What you end up with are media wars."

As of late August, Ontario was the only province in Canada with retail dental clinics. However, despite the few inroads the concept has made in

Canada, other dental association executive members have given the issue some thought. Most interviewed by the Journal agree with the Manitoba position.

The exception is Dr. Claude Chicoine.

As president and executive director of the Association des Chirugiens Dentistes du Quebec, Dr. Chicoine is dead set against retail dentistry. He wants to keep it out of his province.

In his opinion, the retail dental concept is misleading to the public. For this reason, he says it is bound to fail in the long run.

"From what I've seen of retail dentistry in Toronto, it's not cheaper than private office dentistry," he says. "It's just a private office in a department store."

Dr. Chicoine says those who say retail dentistry is a less expensive mode of delivery are making a false presentation. He believes since few people like going to the dentist in the first place, when they discover retail dental clinics are not cheaper, the concept will lose its appeal. The end result — patients still staying away from the dentist.

False presentation

Although other executive directors may not have taken as strong a position as Dr. Chicoine, there seems to be little enthusiasm for the concept. Dr. Ray Wenn, secretary-treasurer and registrar of the Dental Association of P.E.I., says his members would probably oppose the establishment of a retail dental clinic on the island. Dr. Claude Doughty, president of the Royal College of Dental Surgeons of Ontario, says it is the dentists who are becoming involved with alternate delivery systems who are pressing for changes to the College's advertising regulations.

In the News

Yet as Ken Croft, managing director of the College of Dental Surgeons of B.C., puts it: unless retail dental clinics are violating the provincial dental act, there isn't much that can be done.

"We can't control location," he explains.

However, despite this lack of legal controls, Canadian dentists considering the concept will likely not have an easy time of it. The dentist who becomes involved with retail dentistry must be convinced, as Dr. Maycher is, of the "rightness" of his cause, or else he must be thick-skinned enough to withstand the disapproval of the majority of his colleagues.



Oral health project started

An oral health research project is being conducted with financing from the federal Ministry of Health and Welfare.

A \$122,000 grant — one of 10 approved throughout Canada in August — will finance the Atlantic Canada Children's Oral Health Survey, a project intended to determine the level of oral health of children in the Atlantic provinces between the ages of 6-7 and 13-14.

The project's findings will provide dental health planners and professionals with invaluable information.

Dr. David Banting, Faculty of

Dentistry at the University of Western Ontario, is conducting the survey.

A total of \$703,278 was approved by Health and Welfare Minister Monique Bégin for the 10 research projects, which are supported through the department's National Health Research and Development Program.

The NHRDP supports scientific research and related activities designed to provide information needed by the department on issues related to the health care system, environmental health, the health consequences of human behavior, and the health status of selected populations.

CFDE Month — An Opportunity

The Canadian Fund for Dental Education awarded its largest single allocation of funds in grants this past year. The total fellowships alone amounted to \$55,000.

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Fellowship assistance is one of the Fund's top priorities.

The full fellowships and the half fellowships are awarded to post-graduate dental students who require financial assistance. These fellowships are contingent on the recipient not making more than a given amount from other sources in the year of study. Repayment is made through teaching in a Canadian faculty for one year full-time or part-time, depending on the length of fellowship awarded. If the candidate is not able to secure employment the money is repaid to CFDE with accumulated interest.

In addition to these fellowships, CFDE contributes financially to dental education through other types of grants and scholarship awards. They include: a \$1,500 grant to each of the 10 Canadian dental schools; a grant to the Canadian Dental Students' Conference; \$3,700 for the completion of the research project at the University of Toronto sponsored by a Hospital

for Sick Children Foundation grant; two scholarships at \$250 each for undergraduate dental students in each dental school; a \$1,000 grant in support of the Sixth World Congress of Dental Care for the Handicapped in Toronto in July 1982; and several smaller grants totalling \$4,700.

CFDE awards approximately \$120,000 in total grants and fellowships each year.

The contribution the Fund makes to improving dental health through these grants is obvious.

All of the Fund's programs — in research, education or service — have service to the profession and the improvement of Canada's dental health as their goal.

Organized only 18 years ago, the Fund has achieved significant progress towards this goal.

But much more remains to be done.

The strength of the Fund rests, as always, on a coalition within the private sector which brings together representatives of the profession, of industry and of education. It was this need to obtain support from the private sector which originally motivated the founders of the Fund, and that need is greater today, especially in light of spiralling inflation rates.

The Fund's ability to achieve its objectives is limited only by its financial resources and to a great extent these are determined by personal

contributions from dentists.

I continue to be deeply concerned that the Fund is personally and directly supported by only 12 per cent of Canadian dentists. I've always felt this to be a pretty sad response.

Obviously, the more money we can work with the more we can do in dental research. This is important, not only for the sake of the dentists, but also because all other potential supporters are profoundly influenced by the profession's tangible endorsement of its own Fund.

CFDE was established nearly 20 years ago and has demonstrated its competence and organization in marshalling the support of dentists, dental auxiliaries, dental industry and many others in the causes of dental education, dental research and dental practice.

The Fund provides a wonderful opportunity to help promote good dental health.

This is an opportune time for each member of the dental profession to enhance his or her profession by making a generous contribution to the Canadian Fund for Dental Education since October is CFDE month. Please send your tax deductible gift to CFDE today.

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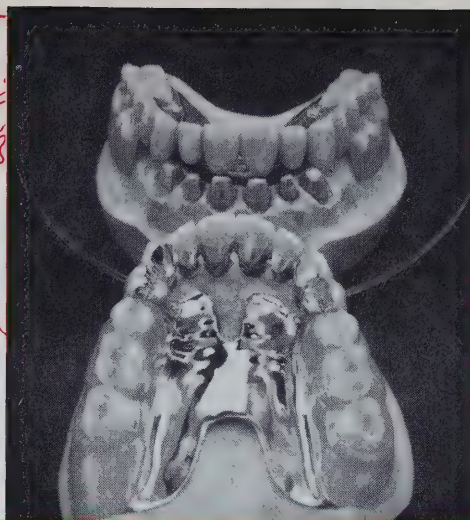
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Saskatchewan facing manpower "crisis"

Saskatchewan dentists will likely be facing a manpower crisis in the near future. This will be a serious problem if the government continues to extend its dental care program, largely administered by dental nurses, to all residents of the province.

Dr. Edward Zak, president of the College of Dental Surgeons of Saskatchewan, says dental manpower is becoming an issue because the population of the province is not significantly increasing.

The move by the provincial NDP government into dental care — first with children, now with adolescents — is causing concern.

"Dentists may face a shortage of patients in a very short time," predicts Dr. Zak. "It's an interesting problem — a challenging one for the profession."

New plan put in place

The new adolescent dental care plan was put into place Sept. 1. In the first year, 14 and 15-year-olds are covered for basic dental treatment. The government expects to add 16, 17 and 18-year-olds to the plan a year at a time.

Means fewer patients

Children under the age of 14 have been covered by a government dental care plan since 1974. Eighty-nine per cent of these children are treated by dental health nurses.

Dr. George Peacock, secretary-treasurer and registrar of the College,

says the adolescent plan is the result of many hours of negotiations by the College with private practitioners and members of the government. Ninety-three per cent of the College's active members have volunteered to participate in the program.

However, the plan will probably mean fewer patients for Saskatchewan dentists.

New people all the time

Dr. Peacock says only about 30 per cent of urban adolescents are slated to see a private practitioner. The rest of the teenagers are assigned to government dental nurses.

But in rural areas, the situation is reversed — approximately 70 per cent of adolescents see private practitioners, 30 per cent see dental nurses. Dr. Peacock says the entire concept of the plan works out to just under 50 per cent of Saskatchewan adolescents receiving their dental treatment from dentists.

Dr. Zak says the reason for a higher percentage of teenage patients for dentists in rural areas is two-fold: it's a means to attract dentists to move outside the city and it is also hoped the concept will keep rural dentists busy.

"One of the reasons dentists are staying in the city is that there are not enough kids to treat in the rural areas," he says. "It doesn't take too much work to put a kid on a successful preventive program. If dental nurses were treating most of the teenage patients, in a short period of time, rural dentists would wind up with nothing to do.

"At least in the cities, we've got new people moving in all the time which

means new patients. The government saw the merit of our argument and agreed that rural dentists should be treating most kids in their area."

"Allocation of adolescents to dentists or to dental nurses is done on a school basis. Dr. Zak says this resulted in the College's "biggest battle" with the government over the issue of freedom of choice.

Teenagers attending schools assigned to dental nurses do not have the option of seeing a private practitioner instead. On the other hand, students seeing a dentist cannot receive their treatment from a dental nurse.

Dr. Zak says the College wanted teenagers or their parents to have the right to choose who they would like to service their dental needs. But the government thought such a system would be too hard to administer.

Parents of teenagers assigned to dentists were allowed to choose the dentist of their choice, but adolescents receiving care from dental nurses do not pick the nurse who will treat them. Dr. Peacock says students receiving treatment from private practitioners can change dentists, but they must have a good reason.

"Lots of resistance"

"Otherwise, we'll just end up with shoppers," he says.

The overall feeling of Saskatchewan dentists to the plan appears to be one of acceptance, but not enthusiasm.

"There was a lot of resistance at first," says Dr. Zak. "It's the same feeling that everyone has regarding

more and more government. Unfortunately in Saskatchewan, we can't do anything about it. We'd be far happier if the government would stay out of dentistry completely."

Dr. Zak adds that the College's main concern is that the provincial government will continue to become involved in dental care programs for all residents of the province. Already there is talk of a place for seniors and although government officials deny there is anything definite on the drawing board, Dr. Zak says he would not be surprised if the government suddenly announced such a program.

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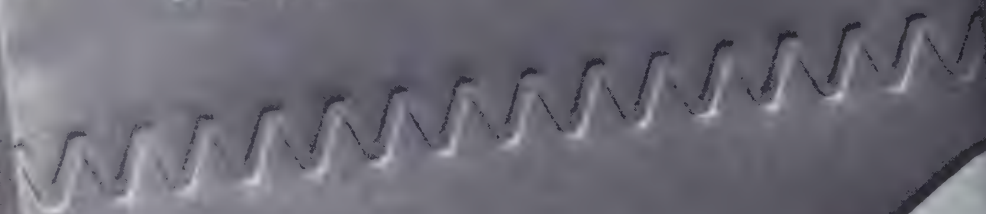
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stresses the careful evaluation of pa-
tients' oral, physical and psychological
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2

ORAL HISTOLOGY/DEVELOPMENT, STRUCTURE AND FUNCTION

By A. RICHARD TEN CATE, B.Sc.,
B.D.S., Ph.D., Dean, Faculty of Dentis-
try, University of Toronto, Toronto,
Canada; with 10 contributors. March,
1980. ISBN 0-8016-4886-6. Approx. 500
pages, 800 illustrations. About \$37.50 (H)

This thoroughly documented new
text provides comprehensive coverage
of oral histology. The extensively illu-
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vides background in general histology
for dental personnel...and discusses
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face and oral cavity including specific
tissues and organs. In addition, the
author provides general clinical appli-
cation.

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Dental and Community Dentistry, Univer-
sity of British Columbia, Vancouver,
B.C. Faculty of Dentistry, University of
Canada. ERIC E. SPOHN, D.D.S.,
Associate Professor Dept. of Con-
sultative Dentistry; Director of the Inter-
disciplinary Office for Dental Aesthetic
Training, University of Kentucky College
of Dentistry, Lexington, Kentucky.
MAS G. BERRY, D.D.S., M.A. A
Dean for Academic Affairs, Pro-
fessor, Dept. of Restorative Dentistry, Uni-
versity of Colorado, School of Dental
Medicine, Denver, Colorado. ISBN 0-8016-
2580-1. 1981, approx. 285 pages, 420
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This new publication is designed
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Sedation, Local and General Anesthesia in Dentistry

*Jorgensen, N.B. and
Hayden, J. Jr.*

*Lea & Febiger,
3rd edition, 1980.
299 pages.*

This is the third edition of a book originally published in 1967. It is aimed at undergraduate dental students, graduate students, specialty students, and practising dentists. Major changes and additions from previous editions reflect the dynamic role of pain and anxiety control in dentistry and dental education in the last decade, so aptly advanced by the late Dr. Jorgensen and by Dr. Hayden.

The text is encyclopedic in scope, covering the history of pain and anxiety control in dentistry, physical evaluation, psychological aspects, pharmacotherapy including local anesthesia, inhalation and intravenous sedation, general anesthesia as well as equipment, and the basic sciences of pharmacology, anatomy and physiology pertinent to the clinical subjects. Each of the 10 chapters is the topic of an individual textbook, yet the over-all content of this volume is surprisingly thorough in just 299 pages. The book serves more as a detailed outline than a definitive reference, and a good bibliography supports the well-referenced chapters which enrich the text.

A major strength of this book lies in its clinical orientation and relevance to current dental practice. The material on general anesthesia is essentially limited to outpatient and uncomplicated inpatient dental procedures.

This chapter does not go into as much depth as the local anesthesia or sedation chapters, reflecting the more advanced knowledge and training needed to safely render a patient unconscious. The specific type of short outpatient anesthetics practised and taught

in many U.S. oral and maxillofacial surgery training programs is discussed, and the remarkable efficacy and proven safety of this well-developed method is documented. The description of the operator-anesthetist is controversial in some areas and emphasis on a team concept with the desirability of a separate professional in charge of the anesthesia is given.

A limited scope of tried and tested drugs for sedation is discussed with the emphasis on well-evaluated drugs and methods. The commonly used drugs are all included, if not specifically, then by closely related compounds. The local anesthesia technique chapter would have benefited from inclusion of the "Gow-Gates" mandibular block which is proving to be a major improvement in dental local anesthesia.

The chapter on equipment and supplies is most valuable in re-

flecting the trends in dental office pain control towards more sophisticated non-invasive monitoring of the cardiac and respiratory systems. Recent concerns over the potentially harmful effects of waste anesthetic gases are responsibly handled in the section on scavenging.

In summary, this book is a valuable source of current practical clinically oriented information on the spectrum of pain and anxiety control in dentistry. "Sedation, Local and General Anesthesia in Dentistry" is suited to its intended readers as a basic outline to be supplemented by provided references in the professional and scientific literature.

*Review by: Burton H. Goldstein,
D.M.D., M.S., Associate Professor,
Oral and Maxillofacial Surgery, University of British Columbia Faculty of Dentistry.*

Essentials of Clinical Dental Assisting

Joseph E. Chasteen

(second edition)

The last decade has seen the delegation of many extra duties to dental auxiliaries resulting in many changes in the traditional training for auxiliaries. The skills of the dental auxiliary greatly enhance the quality of service provided and this textbook provides the necessary information to develop those clinical skills required in the modern office.

This textbook is designed for those dental assistants who have been in the field for some time and wish to brush up on their skills, as well as the student who has little or no knowledge of dentistry and is just entering the profession. This book is specifically written for the chairside assistant. All areas of

clinical dentistry are explored, as are the specialty fields.

The chapter on Preventive Dentistry is especially well done and has an excellent section dealing with Dietary Analysis. Of particular interest is the portion of the chapter on Pit and Fissure Sealants since this duty is now being delegated to dental assistants in some parts of Canada.

Oral diagnosis and treatment planning has a very comprehensive section on dental charting and this chapter would be most useful to the dental assistant returning to the work force after an absence of some years.

This text was reviewed by Elaine Wesley, C.D.A., Executive Director C.D.N.A.A.

La réclame, ce n'est pas pour demain mais ça viendra

La publicité n'est pas une affaire de coeur et beaucoup de dentistes la tiennent comme une indécence, en ce qu'elle implique la concurrence des honoraires, les rabais et le déclin de la profession.

Et pourtant, des voix, qui ne crient plus dans le désert, soutiennent que les administrations provinciales devraient autoriser les dentistes à faire leur propre réclame.

Le gouvernement du Québec le recommande, le gouvernement fédéral surveille de près la situation et la question a été portée devant la Cour suprême du Canada.

Peut-on empêcher le mouvement de s'étendre et de réaliser ses désirs? Mieux encore, devrait-on l'en empêcher?

Certains membres, qui ne forment encore qu'une petite minorité, font déjà pression sur leur association provinciale, soutenant que la publicité peut aider à soulager la profession dont les rangs grossissent plus rapidement que la clientèle.

Certes, on ne prévoit pas de changements immédiats. Si la plupart des directeurs généraux, des registraires et des présidents des associations provinciales, interrogés par les *Journals*, croient que l'avènement de la publicité est inévitable à long terme, les autres s'y opposent avec fermeté.

Tous reconnaissent, cependant, que la publicité ne sera acceptée que si beaucoup plus de membres en font la demande.

Que disent les lois?

Quoi qu'il en soit, est-il illégal de faire de la réclame? Les associations provinciales ont-elles le droit de dicter à leurs membres ce qu'ils peuvent annoncer, quand et comment ils peuvent le faire?

Selon le Ministère fédéral de la consommation et des corporations, la

législation comporte beaucoup de zones grises. Les modifications apportées en 1976 à la Loi relative aux enquêtes sur les coalitions ont placé les industries de services sous la même juridiction que les industries commerciales, les exposant aux mêmes accusations, aux mêmes condamnations et aux mêmes peines pour toute pratique illégale de fixation des prix, de conspiration ou de monopole.

Pour ce qui est des professions, cependant, la jurisprudence donne priorité aux lois provinciales qui accordent aux diverses associations professionnelles le droit de réglementation. Donc, en principe, en ce qui a trait à la médecine dentaire, la compétence décrite dans ces lois ne comprend pas l'application de la Loi relative aux enquêtes sur les coalitions.

En fait, cependant, ce n'est pas si simple.

Wayne Critchley, de la Division du secteur tertiaire au Bureau de la politique de concurrence, fait remarquer que la législation est loin d'être uniforme d'un bout à l'autre du pays. Plusieurs lois ne disent pas expressément si les associations ou les bureaux des permis peuvent restreindre la publicité ou établir des normes d'honoraires. Au Québec, une des rares provinces où la loi spécifie les compétences de réglementation, l'Office des professions (un organisme de surveillance) a recommandé de modifier ces compétences, de façon à permettre la publicité et à supprimer les normes.

Bill Lindsay, chef de la Division du secteur tertiaire, raffine davantage le tableau. Selon lui, même si la loi provinciale permet au bureau des permis de définir et de prohiber ce qui n'est pas professionnel, il y a toujours place à interprétation.

A titre d'exemple, le bureau en question peut considérer la publicité comme inconvenable, mais le ministère fédéral peut voir la chose autre-

ment. Il en va de même des normes d'honoraires. Selon M. Lindsay, si la norme, présentée comme un guide, est appliquée par la plupart des dentistes et si l'on fait pression sur ceux-ci pour qu'ils y adhèrent, le guide ne devient-il pas une liste officielle? Dans un cas comme dans l'autre, le gouvernement fédéral peut considérer la mesure provinciale comme restrictive.

C'est l'argumentation qui a été présenté à la Cour suprême du Canada, dans la cause d'un avocat de la Colombie-Britannique qui a mis en doute le droit de son propre barreau de restreindre la publicité. La cause a été entendue à la fin du mois de mai et le jugement n'a pas encore été rendu. Une décision en faveur de l'avocat aurait des répercussions sur les autres professions, y compris la médecine dentaire.

La question n'a rien d'inédit si on se rappelle ce qui s'est passé au sud de nos frontières. En 1977, un dentiste de l'Arizona avait contesté avec succès, devant la Cour suprême des États-Unis, les restrictions que lui imposaient sa profession en matière de publicité. L'Association dentaire américaine a par la suite autorisé ses membres à faire de la réclame.

Cela se produira-t-il au Canada?

Le Dr Claude Doughty, président du Collège royal des chirurgiens-dentistes de l'Ontario, fait remarquer que le Canada, ce n'est pas les États-Unis.

Le Dr Claude Chicoine, président-directeur général de l'Association des chirurgiens-dentistes du Québec, se montre confiant que son organisme saura empêcher l'avènement de la publicité dans cette province.

Le Dr Jack Thompson, directeur général et registraire de l'Association dentaire du Nouveau-Brunswick, ne

prévoit pas que la publicité fasse son chemin avant le siècle prochain.

Le Dr George Peacock, du Collège des chirurgiens-dentistes de la Saskatchewan, et M. Ken Croft, du collège de la Colombie-Britannique, croient que si la publicité fait son apparition, la majorité des dentistes s'en abstiendront sous la pression de leurs pairs, ou "sur leur conseil" comme préfère dire le Dr Peacock.

Interrogés par le Journal, d'autres représentants de la profession estiment que les membres n'y sont simplement pas intéressés pour le moment.

Faut-il, alors, poser la question?

Selon M. Don Parmenter, directeur général de l'Association dentaire de la Nouvelle-Écosse, c'est le problème de la main-d'oeuvre qui nous y amène.

"Si la situation s'aggrave, dit-il, les dentistes tenteront de plus en plus de maintenir le nombre de leurs patients et il leur faudra trouver le moyen de les attirer à leur cabinet."

Néanmoins, si la profession prolifère au point de créer un problème de main-d'oeuvre dans les agglomérations urbaines de la Nouvelle-Écosse. M. Parmenter dit ignorer si des dentistes ont demandé l'autorisation de faire de la réclame.

C'est à peu près la même chose dans les autres provinces de l'Atlantique.

Le Dr Toby Gushue, de l'Association dentaire de Terre-Neuve, et le Dr Ray Wenn, de l'association de l'île du Prince-Édouard, ne rapportent aucune demande de renseignements sur la question, alors que le Dr Thompson, du Nouveau-Brunswick, en signale quelques-unes. Celui-ci ajoute que l'association défend toute autre forme de publicité que la carte de

visite ordinaire pour annoncer l'établissement d'un nouveau cabinet, un changement d'heures de bureau ou l'arrivée d'un nouvel associé.

Toutefois, on ne saurait ignorer que, dans les Maritimes, la situation de la main-d'oeuvre diffère grandement des autres parties du pays. Le Dr Gushue note qu'à Terre-Neuve certaines régions rurales manquent "désespérément" de dentistes, alors que le Dr Thompson soutient que si le nombre des dentistes augmente dans sa province, on ne saurait s'en alarmer. Dans l'île du Prince-Édouard, le Dr Wenn ne rapporte aucun problème de main-d'oeuvre, bien que la profession semble y avoir atteint un point de saturation.

Pas de problèmes, mais des demandes

Le Dr Claude Doughty, de l'Ontario, aimerait probablement pouvoir dire qu'il n'y a "pas de problème", mais le collège reçoit des demandes d'autorisation pour faire de la publicité de la part d'un "petit nombre" de membres.

Le Dr Doughty admet que l'Ontario a connu quelques légères dérogations aux règlements dans le passé et que le nombre des contraventions a augmenté au cours des dernières années. Un dentiste a même contesté les règlements et la cause a été portée en appel devant les tribunaux provinciaux.

Malgré les contraventions et les plaintes, le Dr Doughty reste convaincu que le Canada ne suivra pas l'exemple des États-Unis.

"Le recours à la publicité, dit-il, n'a aucune assise sérieuse. Pour chaque dentiste qui contrevient aux règlements, il y en a 20 autres qui s'insurgent et réclament sa "condamnation".

"La situation de la main-d'oeuvre ne vient pas arranger les choses; bien au contraire, c'est un élément du problème qui touche davantage les vieux cabinets de dentiste, établis depuis longtemps. S'ils sentent la pression plus que les autres, ils sont aussi les plus conservateurs et ne veulent pas de la publicité.

"Ce sont les jeunes dentistes qui la demandent, ceux qui n'ont pas compris notre conception du professionnalisme. Ils croient que la dentisterie n'est qu'une entreprise qui doit rapporter des profits."

Vive opposition au Québec

Le Dr Claude Chicoine en est un autre qui s'oppose fermement à la publicité. Son association ne ménage pas les efforts pour combattre le rapport de l'Office des professions qui a demandé, en 1977, l'abrogation des restrictions en matière de publicité.

A son avis, celle-ci marque un premier pas sur la voie de la rémunération par tête, la pratique en circuits fermés et la dentisterie commerciale. Selon lui, cette voie mènerait à la guerre des prix, à la lutte entre dentistes et à une diminution de la qualité des soins.

Le Dr Chicoine croit qu'on peut épargner la publicité à la province, en faisant comprendre aux dentistes du Québec les problèmes qu'elle peut engendrer à la longue.

"Nous informons les dentistes des avantages que nous procure l'esprit d'unité et de solidarité, dit-il. Nous leur faisons voir ce qu'il leur arriverait, s'ils finissaient par travailler contre leurs propres confrères. J'ai confiance que nous réussirons."

Optique légèrement différent dans l'Ouest

La situation est légèrement différente dans les provinces de l'Ouest.

Il y a un an et demi, le Dr Bob Baker, président de l'Association dentaire du Manitoba, craignait que son association ne pût contenir l'élan vers la publicité.

La situation a bien changé depuis. Les dentistes de la province semblent plus occupés et le Dr Baker attribue cela à l'expansion des régimes d'assurance dentaire. L'association songe également à se lancer dans la publicité institutionnelle qui, espère-t-elle, préviendra les problèmes qu'engendrerait un manque de patients.

Par ailleurs, la Saskatchewan aborde la question de la publicité d'une toute autre façon.

S'il n'y a pas eu de véritable demande en ce sens jusqu'ici, le Dr George Peacock explique que le collège permet la publicité, conformément à la Loi relative aux enquêtes sur les coalitions, et suggère des normes qui proposent d'utiliser la traditionnelle carte de visite, sans cependant prohiber strictement toute autre forme de réclame. Toutefois, la publicité ne doit pas offrir des soins supérieurs aux autres, être inexacte ou prêter à confusion, ni porter atteinte à la bonne renommée de la profession.

Le Dr Peacock note seulement quelques cas isolés où des dentistes de régions rurales éloignées n'ont pas suivi les lignes directrices. Les membres sont satisfaits de la publicité usuelle. Le manque de patients ne crée pas de problème "important" pour le moment en Saskatchewan et le Dr Peacock ajoute que, si un dentiste s'éloignait de la publicité traditionnelle, ses collègues de la région le

persuaderaient probablement qu'il n'a pas agi dans le meilleur intérêt de la profession.

Ken Croft, de la Colombie-Britannique, et le Dr Bruno Martinello, de l'Association dentaire de l'Alberta, s'accordent à dire qu'il n'y a pas de débat sur la publicité dans leur province respective. Le Dr Martinello croit même que, si elle était permise, les dentistes n'y auraient pas recours en grande majorité. Il ajoute que les demandes d'autorisation se font très rares et que les dérogations aux règlements sont ordinairement attribuables à l'ignorance.

En Colombie-Britannique, où il y a un problème de main-d'oeuvre, le collège des chirurgiens-dentistes vient de réviser la loi de la médecine dentaire pour y inclure spécifiquement des normes d'honoraires. Le gouvernement examine actuellement les modifications proposées.

Les lignes directrices concernant la publicité n'apparaissent cependant que dans le code de déontologie du collège. Celui-ci ne s'en fait pas pour autant, puisque le code lui déjà a permis de gagner des poursuites.

Tous les bureaux des permis du pays ont des moyens d'intervention, tels les comités de discipline, contre toute dérogation aux règles en ma-

tière de publicité. La plupart du temps, cependant, un entretien avec le contrevenant suffit ordinairement à le rappeler à l'ordre.

Les associations dentaires continueront à désapprouver la publicité, tant que la majorité des dentistes canadiens s'y opposeront. Ceux qui veulent s'y risquer doivent être prêts à affronter la colère de leurs collègues et, peut-être, de longues et coûteuses poursuites judiciaires.

Cadeau ou pas, la question de la publicité continuera à alimenter les discussions. Trop de dentistes s'inquiètent du manque de patients, de la hausse des frais d'exploitation et de la baisse des recettes. La concurrence n'apportera peut-être pas de solution, mais certains dentistes voudraient... y voir de plus près.

Le journal est connu aux quatre coins du monde

La diffusion du Journal de l'Association dentaire canadienne s'étend aux quatre coins du monde.

Son caractère bilingue lui permet d'avoir un rayonnement dans les pays

Régime d'épargne-retraite de l'ADC

Les valeurs respectives du Régime d'épargne-retraite de l'Association Dentaire Canadienne étaient les suivantes au 31 août 1981.

<i>Fonds d'actions ordinaires</i>	\$52.6154
<i>Fonds à revenu fixe</i>	\$23.0438
<i>Fonds garanti</i>	\$20.8904
<i>Fonds de placement</i>	\$12.0820

L'avoir total (valeur marchande) du régime s'élevait à \$31,230,817.

Au 31 juillet 1981, les chiffres du mois précédent étaient les suivants:

<i>Fonds d'actions ordinaires</i>	\$53.9542
<i>Fonds à revenu fixe</i>	\$22.8150
<i>Fonds garanti</i>	\$20.6079
<i>Fonds équilibré</i>	\$12.3471

L'avoir total (valeur marchande) du régime s'élevait à \$31,792,205.

Pour obtenir tout renseignement supplémentaire, prière de s'adresser aux: Régimes des rentes et d'assurances subventionnés par l'ADC, P.O. Box 7500, Station A, Toronto, Ontario M5K 1A0.

de la francophonie, tels la France, la Belgique, le Nigéria, la Suisse et les pays d'Afrique du Nord.

Sa diffusion s'étend aussi des Pays-Bas à la Chine, de l'Argentine à l'Australie.

Il compte parmi ses abonnés l'École dentaire de l'hôpital Nair, en Inde,

l'Université d'Hiroshima, au Japon, l'Association dentaire australienne et l'Université du Queensland, en Australie, de même que diverses universités du Chili et du Brésil, et l'Université aristotélicienne de Thessalonique, en Grèce.

Qu'il s'agisse de personnes, d'uni-

versités ou d'institutions, son tirage s'étend en Afrique du Sud, en Thaïlande, à Cuba, en Bulgarie, à la Barbade, aux Bermudes, en Égypte, en Turquie, en Allemagne de l'Ouest, à Hongkong, en Hongrie, en Israël, en Italie, en Corée; en Malaisie et au Mexique.

L'éducation dentaire, un besoin pour la profession

Les subventions versées par le Fonds canadien d'éducation dentaire ont atteint un sommet l'année dernière et les bourses de perfectionnement se sont élevées à 55 000 \$.

Plus de 1,5 million de dollars ont été consacrés à des projets de recherche dont bénéficient les dentistes, les facultés de médecine dentaire, les professeurs, les étudiants, les auxiliaires ainsi que les patients eux-mêmes.

L'aide au perfectionnement est un des objectifs prioritaires du Fonds.

Des bourses d'études post-universitaires, entières ou partielles, sont accordées aux étudiants qui ont besoin d'aide financière. La somme versée dépend du financement que l'étudiant reçoit d'autres sources pour chaque année d'étude. En retour, l'étudiant est tenu d'enseigner pendant un an, à temps plein ou partiel selon la durée de la bourse, dans une faculté de médecine dentaire canadienne, à défaut de quoi il doit rembourser le Fonds avec intérêt.

Outre le perfectionnement, le Fonds participe financièrement à l'avancement de l'éducation dentaire par d'autres genres de subventions ou de bourses d'études: une subvention de 1 500 \$ a été versée à chacune des 10 facultés ou écoles de médecine dentaire du Canada; une autre subvention a été versée à l'organisation de la Conférence des étudiants dentistes du Canada; une somme de 3 700 \$ a servi à terminer un travail de recherche fait à l'Université de Toronto et parrainé par la *Hospital for Sick Children*

Foundation; une bourse d'étude de 250 \$ a été versée à chaque étudiant de toutes les facultés de médecine dentaire; une subvention de 1 000 \$ a été accordée pour la tenue du sixième congrès mondial des Soins dentaires aux handicapés, qui aura lieu en juin 1982 à Toronto; 4 700 \$ ont été affectés à diverses autres subventions de moindre importance.

Le Fonds canadien d'éducation dentaire verse environ 120 000 \$ par année en subventions et en bourses de perfectionnement. Il contribue ainsi, de toute évidence, à l'amélioration de la santé dentaire.

Ses programmes de recherche, d'éducation et autres ont tous pour but de servir la profession et d'améliorer la santé dentaire de la population canadienne.

Etabli depuis 18 ans seulement, le Fonds a déjà fait beaucoup dans la poursuite de cet objectif.

Il reste cependant beaucoup à faire.

Comme toujours, il trouve sa force dans le ralliement de tous les groupes du secteur privé: la profession, l'industrie et le monde de l'enseignement. C'est d'ailleurs pour obtenir cet appui du secteur privé qu'il a été créé et ce besoin se fait sentir plus que jamais aujourd'hui, compte tenu de la spirale inflationniste.

Ce n'est que dans la mesure de ses ressources financières que le Fonds atteindra ses objectifs, mais cette mesure dépend principalement de la participation personnelle des dentistes eux-mêmes.

Pourtant, seulement 12 pour cent des dentistes canadiens contribuent personnellement au Fonds. Je trouve toujours cela bien triste et fort inquiétant.

Il est évident que plus nous aurons de l'argent, plus nous ferons avancer la recherche dentaire. La participation des dentistes est donc importante non seulement pour leur propre intérêt, mais aussi parce qu'elle influence considérablement celle des autres qui jaugent ainsi dans quelle mesure les membres de la profession soutiennent eux-mêmes concrètement leur propre Fonds.

Depuis sa création, celui-ci s'est avéré un moyen excellent de regrouper les compétences et de rallier les dentistes, les auxiliaires et l'industrie dentaires et bien d'autres groupes à la cause de l'éducation, de la recherche et de la pratique dentaire.

Le Fonds offre une occasion excellent d'aider à l'avancement de la santé dentaire.

Le mois d'octobre étant celui du Fonds canadien de l'éducation dentaire, le moment ne peut être mieux choisi pour inciter chaque membre de la profession à y aller d'une contribution généreuse pour promouvoir l'avancement de sa propre profession. Votre contribution est déductible de l'impôt. Envoyez-la aujourd'hui-même.

*le président du
Conseil d'administration du FCED,
James A Guest, D.D.S.*

La "boutique" versus le "cabinet" du dentiste

Le Dr David Maycher soutient qu'il a réussi parce qu'il a ouvert une «boutique» dans un grand magasin au centre-ville de Winnipeg.

Son association dentaire dit qu'elle peut s'accommoder de la situation.

Les autres dentistes ne savent trop quoi en penser.

Cette notion nouvelle de la dentisterie commerciale, qui se répand dans le pays, de même que les expériences qu'elle suscite dans les magasins à rayons du Canada, n'est pas sans éveiller l'attention des médias et des consommateurs.

Rester tranquille

Quoiqu'elle fasse l'objet d'une trêve tacite et gênante dans les milieux officiels, elle en inquiète plusieurs.

L'ouverture en novembre 1980 de la clinique dentaire du Dr Maycher dans le magasin La Baie a causé certains problèmes. Premier dentiste à ouvrir une boutique au Manitoba, il s'est fait une certaine réputation parmi ses collègues.

La critique a porté surtout sur la question des honoraires. Les dentistes de la province n'ont pas prisé l'idée que le Dr Maycher a eue de les afficher à l'entrée de sa salle d'attente, pas plus qu'ils n'ont aimé les voir mentionnés dans un article qui a occupé une pleine page du *Winnipeg Free Press*.

Les choses se sont tassées depuis, mais le Dr Maycher a posé son affiche dans la salle d'attente et il continuera à donner des entrevues aux médias, mais ne parlera pas de ses honoraires.

Quant aux autres critiques, le Dr Maycher ne veut pas y répondre, préférant rester tranquille et attendre que le calme revienne.

Quand il a ouvert sa clinique, il ne s'est pas préoccupé outre mesure de la réaction.

"Je ne croyais pas que mon geste avait vraiment quelque chose de réprensible; je croyais, au contraire, qu'il y avait beaucoup de bon", dit-il.

Diplômé en 1978 de la faculté de dentisterie de l'Université du Manitoba, le Dr Maycher a pratiqué deux ans à titre d'associé avant de voler de ses propres ailes.

Il a pensé qu'en ouvrant une boutique dans un grand magasin il pourrait établir rapidement son propre cabinet. Aujourd'hui, c'est fait, dit-il.

Le printemps dernier, il a engagé trois nouveaux diplômés à titre d'associés. Une hygiéniste, qui est aussi infirmière dentaire, travaille pour lui à plein temps. Et le Dr Maycher de dire qu'il n'est pas le seul à être heureux de la tournure des événements, les patients aussi sont satisfaits.

"J'ai été chanceux, je le reconnais. Les choses auraient pu mal tourner."

Le Dr Bob Baker, président de l'Association dentaire du Manitoba, déclare que l'association n'interviendra pas tant que les activités de la dentisterie commerciale respecteront les règlements.

Il reconnaît cependant que, sous certains de ses aspects, telle la publicité, la dentisterie commerciale le rend un peu "nerveux".

Pour ce qui est du Dr Maycher, la publicité ne semble pas poser de problème. Même si elle était permise un jour, il hésiterait à s'en servir.

Quant aux autres dentistes du Manitoba qui décideraient à l'avenir d'ouvrir leur propre boutique, ils n'est pas certain qu'ils fassent comme le Dr Maycher.

Le Dr Baker considère la publicité comme quelque chose de "volatile".

"Je n'aime pas cela, dit-il. Je ne crois pas que le public puisse apprécier si un dentiste est bon par le truchement de la publicité. Cela mènera à la surenchère dans les médias."

"Jusqu'à la fin d'août, l'Ontario était la seule province du Canada à avoir des boutiques dentaires. Et, si la notion de la dentisterie commerciale a progressé quelque peu au pays, les dirigeants des autres associations dentaires n'ont pas été sans y réfléchir. La plupart de ceux que le Journal a interrogés partagent les vues du Manitoba.

Sauf le Dr Claude Chicoine.

A titre de président-directeur général de l'Association des chirurgiens-dentistes du Québec, le Dr Chicoine rejette entièrement la dentisterie commerciale. Il veut la garder hors sa province.

A son avis, cette notion est de nature à induire le public en erreur et l'expérience finira par échouer à la longue.

"Si j'en juge par ce que j'ai vu à Toronto, la dentisterie commerciale n'offre pas de services à meilleur prix que le cabinet de pratique privée. Ce n'est d'ailleurs rien d'autre qu'un cabinet de dentiste situé dans un magasin à rayons."

"Pas beaucoup d'enthousiasme"

Le Dr Chicoine soutient qu'il est faux de prétendre que la dentisterie commerciale est un mode moins coûteux de prestation des services. Puisqu'il y a déjà très peu de gens qui aiment aller chez le dentiste, lorsqu'on s'apercevra que la boutique de dentiste n'offre pas de services à meilleur prix, l'idée, à son avis, perdra tout son attrait. Et, en fin de compte, les patients continueront à se tenir loin du dentiste.

"Voilà des dentistes qui cherchent à faire facilement de plus en plus d'argent. Ils y arriveront s'ils sont compétents."

"Il se peut que les dentistes se tournent vers la commercialisation à cause du problème de la main-d'oeuvre mais, en fait, ils glissent sur une mauvaise pente, sans s'interroger sur leur avenir."

Sans avoir pris position aussi fermement que le Dr Chicoine, les autres directeurs généraux ne montrent pas beaucoup d'enthousiasme. Le Dr Ray Wenn, secrétaire-trésorier et registraire de l'Association dentaire de l'île du Prince-Édouard, dit que ses membres s'opposeront probablement à

l'établissement de boutiques dentaires dans l'île. Le Dr Claude Doughty, président du Collège royal des chirurgiens-dentistes de l'Ontario, soutient que ce sont les dentistes intéressés par les nouveaux modes de prestation des services qui font pression sur le collège pour modifier les règlements en matière de publicité.

Quoi qu'il en soit, comme le dit M. Ken Croft, directeur général du Collège des chirurgiens-dentistes de la Colombie-Britannique, tant que les boutiques dentaires respecteront la

loi provinciale, on ne peut rien y faire.

"Nous ne pouvons pas contrôler l'emplacement des cabinets", explique-t-il.

Toutefois, malgré ce manque de réglementation, les dentistes canadiens qui voudront tenter l'expérience n'auront pas la vie facile. Ils devront, comme le Dr Maycher, être convaincus de la "justesse" de leur cause, ou encore ils devront s'endurcir l'épiderme pour supporter le désaveu de la plupart de leurs collègues.

L'Ontario affecte 274 000 \$ à la recherche dentaire

Le Ministère de la santé de l'Ontario a affecté plus d'un quart de million de dollars à la recherche dentaire.

Les subventions, qui s'élèvent à 274 644 \$, sont tirées d'une somme de 4,1 millions de dollars que le ministère vient d'affecter à 128 projets de recherche, formant la première tranche des projets qu'il se propose de financer au cours de l'exercice 1981-1982.

La somme la plus importante, 54 075\$, va aux Drs G.A. Zarb et J.M. Symington, du Département de prosthodontie à l'Université de Toronto, pour leur recherche sur l'implantation de ponts fixes dans la cavité osseuse chez les patients édentés.

Les autres subventions de recherche dentaire se répartissent comme suit:

- * 5 000 \$ au Dr N.A. Farrell, de la Société ontarienne des dentistes en hygiène publique pour la tenue d'un atelier sur les techniques d'appréciation à l'intention des directeurs des soins dentaires dans les services de santé de l'Ontario;
- * 27 343 \$ aux Drs K.A. Galil, I.

Schofield et G.Z. Wright, de l'Université *Western Ontario*, pour leur étude sur l'application d'adhésifs sur les tissus en chirurgie buccale;

- * 20 350 \$ aux Drs D.R. Gratton, R.E. Jordan et M. Suzuki, de l'Université *Western Ontario*, pour une étude clinique sur la préservation des prothèses antérieures fixes par des moules mordancées;
- * 40 000 \$ aux Drs L.N. Johnson et R.E. Jordan, de l'Université *Western Ontario*, pour l'étude des propriétés physiques des matériaux dentaires;
- * 11 195 \$ aux Drs L.N. Johnson et P.S. Sills, de l'Université *Western Ontario*, pour effectuer des tests sur les dentiers à contour souple et les produits servant à conditionner les tissus;
- * 20 050 \$ aux Drs R.E. Jordan et M. Suzuki, de l'Université *Western Ontario* pour une recherche sur les résines à microparticules;
- * 11 813 \$ aux Drs M. Suzuki et L.N. Johnson, de l'Université *Western Ontario*, pour une étude sur le

polissage des amalgames à forte teneur de cuivre;

- * 7 660 \$ au Dr D.W. Lewis, de l'Université de Toronto, pour la troisième phase de sa recherche sur les services de soins dentaires et en épidémiologie;
- * 20 000 \$ au Dr D. McComb, de l'Université de Toronto, pour faire des essais cliniques de deux nouveaux amalgames d'argent servant à la restauration des dents postérieures;
- * 28 888 \$ aux Drs H.J. Sandham et R.C. Burgess, de l'Université de Toronto, pour le développement de streptocoques mutagènes pour prévenir la carie dentaire;
- * 29 270 \$ au Dr D.C. Smith, de l'Université de Toronto, pour déterminer dans quelle mesure la cristallisation de l'émail peut aider à la liaison de la résine à la surface des dents.

Ces subventions couvrent la période du 1^{er} avril 1981 au 31 mars 1982.

Y aura-t-il un manque de patients en Saskatchewan?

Les dentistes de la Saskatchewan craignent de se trouver très bientôt devant un problème de main-d'oeuvre fort sérieux, si le gouvernement provincial continue d'étendre progressivement à tous les résidents son programme de soins dentaires administré, en grande partie, par des infirmières.

Le Dr Edward Zak, président du Collège des chirurgiens-dentistes de la Saskatchewan, précise que le problème prend de l'ampleur parce que la population de la province n'augmente pas suffisamment.

Les soucis ont commencé lorsque le gouvernement NPD de la province s'est mis à s'occuper des soins dentaires, d'abord chez les enfants puis chez les adolescents.

"Les dentistes pourraient se trouver sans patients en un rien de temps, de dire le Dr Zak. C'est un problème fort intéressant. . . un défi pour la profession."

Le nouveau régime de soins dentaires pour les adolescents est entré en vigueur le 1^{er} septembre. La première année, il couvre les traitements élémentaires des jeunes de 14 et 15 ans et le gouvernement prévoit l'étendre graduellement chaque année, aux jeunes de 16, 17 et 18 ans.

Les enfants de moins de 14 ans sont soumis au régime depuis 1974 et reçoivent leurs soins d'infirmières dentaires, dans une proportion de 89 pour cent.

Le Dr George Peacock, secrétaire-trésorier et registraire du Collège, précise que l'application du régime aux adolescents avait fait l'objet de très longues négociations entre le collège, les dentistes de pratique privée et l'administration provinciale. Quarante-deux pour cent des membres du Collège ont accepté volontairement d'y participer.

Malgré tout, la mise en oeuvre du régime entraînera probablement une

réduction du nombre des patients pour les dentistes de la Saskatchewan.

Le Dr Peacock souligne que, dans les régions urbaines, 30 pour cent environ des adolescents verront le dentiste de pratique privée, les autres se voyant forcés de s'adresser à l'infirmière dentaire du gouvernement.

Dans les régions rurales, c'est le contraire: quelque 70 pour cent des adolescents verront le dentiste et 30 pour cent, l'infirmière. Dans l'ensemble, selon le Dr Peacock, les modalités d'application du régime font qu'un peu moins de la moitié des adolescents de la Saskatchewan recevront leurs soins dentaires du dentiste.

Le Dr Zak explique que la fréquentation du dentiste dans les régions rurales sera plus élevée pour deux raisons: on veut inciter les dentistes à quitter la ville et on espère les garder occupés dans les régions rurales.

"Par contre, entre autres raisons, les dentistes préfèrent rester à la ville parce qu'il n'y a pas suffisamment d'enfants à la campagne, de noter le Dr Zak. Faire de la prévention chez les enfants ne demande pas beaucoup de travail. Si les infirmières dentaires traitent la plupart des adolescents des régions rurales, les dentistes locaux n'auront vite plus rien à faire.

"Dans les villes, au moins, il arrive continuellement de nouvelles gens et cela signifie de nouveaux patients. Le gouvernement s'est rendu à cet argument et a accepté de faire traiter par les dentistes locaux la plupart des enfants du secteur rural."

La répartition des adolescents entre les dentistes et les infirmières se fait par école. Ceci a donné lieu, selon le Dr Zak, à "la plus grande bataille" menée contre le gouvernement en ce qui a trait à la liberté du choix.

Les adolescents qui fréquentent les écoles assignées aux infirmières n'ont pas le choix de voir un dentiste de pratique privée. Par ailleurs, les élèves qui vont chez le dentiste ne peuvent pas recevoir de soins de l'infirmière.

Le Dr Zak fait remarquer que le Collège voulait que les adolescents ou leurs parents aient le droit de choisir librement, mais le gouvernement a trouvé qu'un tel régime aurait été trop difficile à administrer.

Les parents des adolescents confiés aux soins du dentiste peuvent choisir leur dentiste, mais les adolescents confiés aux soins de l'infirmière ne peuvent pas s'adresser à l'infirmière de leur choix. Le Dr Peacock ajoute que les élèves qui sont suivis par un dentiste de pratique privée peuvent changer de dentiste, mais ils doivent avoir une bonne raison.

"Autrement, dit-il, on risque de les voir faire du magasinage."

Le sentiment général qui se dégage chez les dentistes de la Saskatchewan en est un d'acceptation, sans trop d'enthousiasme.

"Il y a eu, d'abord, beaucoup de résistance, de dire le Dr Zak. C'est la réaction que nous avons tous quand nous voyons le gouvernement étendre de plus en plus son intervention. Malheureusement, en Saskatchewan, nous n'y pouvons rien. Nous serions beaucoup plus heureux si le gouvernement n'intervenait pas du tout."

Le Dr Zak ajoute que le Collège craint surtout de voir le gouvernement provincial étendre son programme de soins dentaires à tous les résidents de la province. On parle déjà d'un projet pour les personnes âgées et, même si les fonctionnaires affirment qu'il n'y a encore rien de précis à ce sujet, il ne faudrait pas se surprendre, selon lui, de voir le gouvernement annoncer soudainement un programme en ce sens.

DENTAL MANAGEMENT OF THE MEDICALLY DISABLED ADULT

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The medically compromised patient seeking oral health care presents a special problem for the dentist. Medication received by the patient or the disease process itself may require modification of the dental treatment plan. The provision of comprehensive health care will require the collaborative efforts of the physician and the dentist.

In this paper, the common medical problems seen in adult patients receiving dental care will be reviewed. The reader is encouraged to make use of the major references^{1,2} for further information and to discuss each patient's unique situation with the attending physician.

The areas to be reviewed are:

1. Cardiovascular disease
2. Renal disease
3. Diabetes
4. Bleeding disorders
5. Hepatitis
6. Pregnancy
7. Alcoholism

CARDIOVASCULAR DISEASE

Cardiovascular diseases are quite prevalent in the North American population and, therefore, regularly encountered in patients presenting for oral health care.³ The major cardiovascular problems seen in adults are:

- Rheumatic heart disease
- Atherosclerotic heart disease
- Congestive heart failure
- Post cardiac surgery
- Hypertension

Rheumatic heart disease

Patients with a history of rheumatic fever and/or

rheumatic heart disease require special management when they present for oral health care. The risk of bacterial endocarditis in these patients is well known to every dentist. They may be divided into four general groups.¹

The first group includes those patients who have a history of rheumatic fever but who have had no definitive diagnosis of rheumatic heart disease. These patients frequently give a history of febrile illness in childhood, suggestive of rheumatic fever. If the disease occurred more than 20 years ago and the patient has been free of clinical disease since that time, no antibiotic coverage is indicated prior to dental therapy. If the illness is more recent, it is appropriate to refer the patient for medical evaluation. If the patient has current signs or symptoms of congestive heart failure, the patient should, of course, be referred for medical evaluation and given antibiotic coverage prior to dental therapy.

The second group of patients includes those with a history of a heart murmur of unknown etiology. The typical history will be that of a patient who was once "told I had a murmur." These patients should be referred for medical evaluation, and if the murmur is felt to be pathologic rather than functional, antibiotic coverage is indicated prior to dental therapy.

The third group includes those patients in whom a diagnosis of rheumatic fever has been made. If the patient has not had medical follow-up, he should be referred for evaluation. If a medical evaluation has been done, and there is no evidence of heart disease, no antibiotic coverage is indicated. If the medical examination reveals asymptomatic heart disease, antibiotic coverage is indicated.

The fourth group of patients includes those with symptomatic rheumatic heart disease. The physician should be contacted in every case. The patient may be treated if he is

under good medical control and antibiotic coverage is, of course, appropriate.

The recommended prophylactic antibiotic regimen has been developed by the American Heart Association in co-operation with the American Dental Association.⁴ The regimen includes the use of potassium penicillin V, 2 grams by mouth, 30 minutes to one hour before the dental procedure, followed by 500 milligrams every six hours for eight doses.

Patients who are allergic to penicillin should receive erythromycin, one gram by mouth initially, followed by 500 milligrams every six hours for eight doses. Patients who are receiving penicillin to prevent recurrent rheumatic fever should receive erythromycin rather than penicillin.

Those patients who have artificial heart valves or have had recent cardiovascular surgery fall into a special category. It is recommended these patients receive aqueous penicillin G plus procaine penicillin G, (given intramuscularly), plus streptomycin. An alternative therapy is intravenous vancomycin. Obviously, close collaboration with the attending cardiologist is indicated.

The patient with a history or diagnosis of rheumatic heart disease should receive as much treatment as possible at each appointment. The patient should have antibiotic coverage for all dental procedures, including periodontal probing and the taking of impressions for study models. It has been recommended that crown and bridge procedures be completed in as few visits as possible, to minimize the need for repeated episodes of prophylactic antibiotic therapy.

Valve replacement patients with *advanced* periodontal disease present a special case. Because of the high likelihood of continuing or recurrent bacteremia, full mouth extraction should be considered for these patients, as a means of protecting the artificial valve from sepsis.

Atherosclerotic heart disease

Coronary atherosclerotic heart disease is also frequently encountered in dental patients. These patients may be suffering from either angina pectoris, or have had a recent myocardial infarction. The goal of managing patients in either category is the reduction of the stress and anxiety frequently associated with dental therapy. Good communication between the patient and the dentist is important to reduce this stress. Premedication may also be helpful. Appointments should be kept as short as possible, consistent with the necessary dental treatment.

For patients with a history of angina pectoris, nitroglycerin should be available in the dental office. This is used either as sublingual tablets or as a paste applied to the sternal area. The dentist should know where the patient keeps his personal medication and also have medication available in the office. Local anesthesia is acceptable with an epinephrine concentration of 1:100,000. A maximum of three cartridges should be used at any one site. Vaso-

pressors should *not* be used in material for hemostasis nor for giving packing. No routine dental care is indicated in the first six months following a myocardial infarction. Only emergency care should be done at that time.

If the patient has been receiving anticoagulation therapy, the prothrombin time should be evaluated. Local anesthesia is desirable, providing epinephrine concentration is kept to a minimum. Vasopressors should *not* be used for hemostasis nor for gingival packing. Many patients with myocardial infarction receive medications such as digitalis or quinidine which may produce vomiting and therefore complicate dental treatment. Antisialogogues should not be used during dental care, as they tend to cause tachycardia.

Congestive heart failure

Congestive heart failure is another condition seen in patients reporting for dental treatment. Etiology of congestive heart failure includes such factors as valvular disease, hypertensive disease, myocardial infarction, hyperthyroidism, and emphysema.

For each of these conditions the dentist should confirm the medical status of the patient and the medication regimen by consultation with patient's physician.

Patients with congestive heart failure may be treated with digitalis. As this drug has a tendency to induce nausea and vomiting, it is important to avoid stimulation of the gag reflex during dental treatment. If the patient is receiving anticoagulant therapy, e.g., dicumarol, the prothrombin time should be determined. Patients receiving diuretics to manage congestive heart failure may suffer from dehydration and xerostomia. They may also have hypokalemia and resultant dysrhythmia. The dental patient with congestive heart failure is often better treated with the chair in an upright position. This should certainly be the case if the patient suffers from postural dyspnea.

Cardiac surgery

Due to advances in surgical techniques, the number of patients with surgically corrected cardiac disease is increasing annually. It is important to determine the type of surgical procedures prior to preparing a therapeutic regimen for the patient.⁵ Those patients who have a septal defect should receive antibiotic coverage before the surgical closure of the defect and for any dental procedures within the first six months following cardiac surgery. If the defect has been closed with pericardial tissue, no prophylaxis is required beyond the first post-surgical six months. Those patients who have received "Dacron" patches will require antibiotics whenever dental care is rendered. Patients who have had a ligated or resected ductus arteriosus should also have antibiotic coverage during the first six months following the cardiac surgical procedure. Patients who have had a commissurotomy for cardiac valvular disease must always have antibiotic coverage before dental procedures. Patients who have had

a prosthetic valve replacement must follow prophylactic "Regimen B" of the American Heart Association". This regimen includes penicillin G, procaine penicillin, and streptomycin. Patients who have had a coronary artery bypass operation require prophylactic antibiotics only in the immediate post-operative period. Patients who have had arterial grafts should have antibiotic coverage during the first six months following surgery. No further coverage is necessary if the patient has had an autogenous graft, but if a synthetic graft is used, coverage should always be given. Patients who have had implantation of a pacemaker have a low risk of bacterial endocarditis and do not usually need prophylactic antibiotic therapy. Some authorities feel there is a potential hazard with use of certain types of electrical equipment, such as ultrasonic scalers or electrocautery units. The dentist should determine the features of his particular unit and discuss the details with the patient's cardiologist to determine any possible hazard.

Patients who have had a joint prosthesis should receive antibiotic coverage to prevent the hematogenous spread of infection to the prosthesis. The prophylactic regimen is essentially that used for patients with a history of valvular cardiac disease.

Hypertension

Hypertension is very common in the North American population.⁶ The disease is usually a result of increased peripheral resistance and may result from either renal or non-renal causes. Approximately two thirds of all cases of hypertension are classified as "ideopathic or essential hypertension." In these cases, the etiology is not known. Patients with hypertension are treated with a variety of medications. It has been stated that there is "no particular best drug for the treatment of high arterial pressure." Patients may be receiving antihypertensive medication such as reserpine, methyl dopa, guanethidine or propranolol. These agents have side effects of nausea and vomiting, as well as xerostomia. The patients may also be receiving diuretics such as hydrochlorothiazide, spironolactone, or furosemide. The degree of control of the patient's hypertension and compliance with the therapeutic regimen should be determined. As these patients may have postural hypotension, care should be taken when the patient arises from the dental chair, particularly if the procedure has been long and a lounge-type chair is used. If nitrous oxide is administered, hypoxia should be avoided. Local anesthetic solutions containing weak concentration of epinephrine are acceptable. Gingival packing material containing vasopressors should not be used.

Pulmonary disease

Another common finding in patients presenting for dental care is pulmonary disease. Patients suffering from respiratory diseases, both acute and chronic, require modification of their dental treatment. Pulmonary

diseases may arise in a variety of ways. Among the mechanisms involved are a reduction in the distensibility of the lungs, a replacement of lung parenchyma by non-ventilating tissue, compression of the lungs by space-occupying lesions, a weakness or paralysis of the respiratory muscles, immobilization of the chest wall, upper airway obstruction, and chronic lower airway obstruction.

In the management of patients with pulmonary disease, it is extremely important to avoid respiratory depression. Among the drugs which cause respiratory depression are the barbiturate sedatives and morphine. General anesthesia should also be avoided as should bilateral mandibular blocks.

If the patient has severe chronic lung disease, or partial obstruction of the nasopharynx, a rubber dam should be avoided. The rubber dam can cause both physical and psychological impairment to respiration in these generally apprehensive patients. It is also advisable to avoid 100 per cent oxygen administration, as depression of the ventilatory drive may result and respiratory distress will ensue.

In spite of significant advances in chemotherapy and active case-finding procedures, pulmonary tuberculosis remains a public health problem.⁷ Patients with active infection should not receive elective dental treatment. If emergency treatment is necessary, infection precautions must be taken to protect the health of the dentist, his assistant and other patients who may follow in the dental operatory. Once a patient has been rendered non-infective by medical therapy, routine dental treatment can resume. A high incidence of active pulmonary tuberculosis in recent immigrants from Southeast Asia has been reported.⁸ Dentists treating these patients should be aware of this possible infectious hazard.

RENAL DISEASE

It has been estimated that eight million people in the United States have some form of kidney disease and approximately 60,000 deaths occur annually as the result of uremia.¹

Patients with chronic renal diseases require a modification of dental therapy. Office dental care of patients with chronic renal failure should be avoided if the blood urea nitrogen exceeds 60 milligrams or the creatine exceeds 1.5 milligrams. The blood pressure should be monitored prior to any treatment. Care should be taken to avoid nephrotoxic drugs or drugs metabolized by the kidneys. Routine screening for bleeding disorders should be done, including the hematocrit, the partial thromboplastin time and the bleeding time.

Patients receiving hemodialysis therapy require careful dental attention. It is extremely important that these patients be placed in a long-term dental maintenance program so as to avoid any infection in the oral cavity which might complicate or compromise their medical status. Patients entering a hemodialysis program should receive a very careful dental evaluation and compliance

with recommended treatment should be monitored. A patient who has an arteriovenous shunt requires the same prophylaxis to prevent endocarditis and endarteritis as the patient with rheumatic heart disease. These patients also have a very high incidence of hepatitis and the dentist should be certain to know the patient's current hepatitis status during all courses of dental treatment. The matters to be considered in treating dental patients with hepatitis will be covered in another section of this report. The coagulation status of patients receiving hemodialysis must be determined. Hemodialysis will destroy platelets and therefore produce a bleeding diaphysis. The effects of heparinization will last approximately three to four hours. It is generally a good policy to avoid dental therapy on the day of dialysis, but the day following dialysis is considered to be the most appropriate time for dental procedures.

Patients who have received renal transplants are routinely on long-term steroid therapy and may be taking cytotoxic drugs. The dentist should consider supplementing steroid therapy prior to any "stressful" dental procedures, as the patient's own adrenal axis has been suppressed. This therapy should, of course, be instituted in collaboration with the attending physician. The dentist should be aware of the side effects of any cytotoxic drugs the patient may be taking. It is also advisable to prescribe prophylactic antibiotics for these compromised patients.

DIABETES

Diabetes mellitus affects two per cent of the United States population. It has been stated that approximately 50 per cent of the diabetic patients are unaware that they are so afflicted. To extrapolate these figures to an average dental practice of 2,000 patients, one would expect to find 40 diabetic patients, of whom only 20 would be known diabetics. Diabetes is generally classified into several categories. The "pre-diabetic" patient will only develop diabetes during stress, such as pregnancy or severe medical problems. Another group of patients has "latent chemical" diabetes. These patients will develop chemical changes of diabetes under certain stressful conditions. A third group of patients has "chemical" diabetes, a condition which will be determined on blood analysis, but does not present any problems for the patient in terms of symptoms. The fourth group, "clinical" diabetes, includes those patients with the traditional signs and symptoms of diabetes mellitus.

In the dental management of the patient with adult onset diabetes, it is important to determine the degree of control of the patient's diabetic state. The dentist should be aware of methods used by the patient to monitor control of the diabetes and should discuss the extent of control with the patient's physician. The dentist should inquire at the time of initial examination and prior to any therapy as to whether the patient has been routinely using the home urine testing strips and whether the patient has been complying with the medical recommendations, such

as dietary control, use of insulin, and/or use of oral hypoglycemic agents. It has been our experience that many patients report that they are "under good control" whereas in fact they do not monitor their physiologic state, nor do they closely follow their physician's recommendations.

When treating the diabetic patient, the dentist should be aware of the signs and symptoms of both hyperglycemia and hypoglycemia. Hyperglycemia arises in the poorly controlled diabetic, whereas hypoglycemia can be seen in the patient who follows recommendations for taking hypoglycemic agents, such as insulin, but alters his activity so there is less of a need for this medication. Hypoglycemic shock is readily treated once the dentist is aware of the signs and symptoms of the condition.

The poorly controlled diabetic manifests delayed healing following any oral surgical procedure and has a higher incidence of fungal infections in the oral cavity. Indeed, the presence of moniliasis in an otherwise healthy patient should be an indication for evaluation of the diabetic or prediabetic status of the patient. Antifungal therapy is usually rapidly effective, when combined with control of the patient's diabetes.

We have found that diabetic patients with rampant periodontal disease have difficulty in being brought under medical control. Control of the diabetic state is often easier once the oral infection is resolved. Close collaboration with the patient's diabetologist will facilitate treatment planning.

Prior to any surgical procedure, the patient's physician should be consulted and the need for antibiotic therapy should be discussed. In the poorly controlled diabetic, antibiotic therapy is generally indicated. In the well controlled diabetic, the collective judgment of the attending dentist and physician should be used to determine the best management of the patient.

BLEEDING DISORDERS

Patients with bleeding disorders pose a serious problem for the dentist.^{9,10,11,12} It has often been stated, not always in jest, that the best method to detect a bleeding disorder is "to extract a tooth".

Bleeding disorders may be classified into two general categories, the congenital and acquired states. A careful dental history is extremely important in diagnosing a patient with a congenital bleeding disorder. Inquiry should be made as to the presence of bleeding disorders in close relatives. The patient's response to previous dental extractions and surgical procedures should be noted. Easy bruising following relatively minor trauma should alert the dentist to the possibility of an underlying coagulopathy. Physical evaluation by the physician and/or dentist will also aid in the detection of the disorders. Laboratory studies, of course, are extremely important and should include the platelet count, the bleeding time, and partial thromboplastin time and prothrombin time.

The acquired bleeding disorders generally follow the use of medications or concurrent disease states. Aspirin therapy is a common precursor of reduced platelet activity. Many patients are sensitive to aspirin and the platelets circulating at the time of aspirin therapy are not effective in the coagulation mechanism. This effect will last as long as those platelets are circulating. It is preferable to substitute acetaminophen for aspirin in patients who are about to have oral surgical or periodontal procedures.

If a patient has been taking aspirin for a long period of time, the patient should be advised to eliminate the use of aspirin for several days prior to the surgical procedure. Patients receiving anticoagulant therapy, such as coumadin, are of course, special surgical problems. Chronic liver disease such as may be seen in alcoholic patients will also lead to coagulopathies. Chronic leukemia, malabsorption syndrome, and long-term antibiotic therapy are other etiologic factors in acquired bleeding problems.

The management of patients with bleeding disorders requires referral and consultation with a hematologist. It is extremely important to defer any surgical treatment until the diagnosis is completed. Even a scaling and prophylaxis should be avoided, as these can produce long term bleeding problems.

HEPATITIS

In recent years the prevalence of hepatitis has increased markedly.^{13,14} At the same time, many new diagnostic techniques have been developed permitting a very accurate determination of the active and carrier states of the disease. The etiologic agents of viral hepatitis are currently recognized as at least three distinct viruses: Hepatitis A, Hepatitis B, and "non A, non B" hepatitis. There is considerable overlap in the clinical presentation of infection with the various viral agents.

Hepatitis A has been traditionally called, "infectious hepatitis". The main route of transmission is via a fecal/oral route. An attack is thought to confer lifetime immunity and the carrier state is almost nonexistent. The diagnosis of Hepatitis A is made on a clinical basis, although certain immunologic markers have been reported. For example, there is an increased IgM in recent infection and an increased IgG in old infections.

Hepatitis B has been traditionally called, "serum hepatitis". Although parenteral transmission has been the classical route for Hepatitis B, non-parenteral infection via saliva, urine, feces, and semen are now known to be significant factors in the transmission of this disease.^{15,16,17} Approximately five to 10 per cent of the patients develop a carrier state and continue to have a high level of Hepatitis B surface antigen. The diagnosis of Hepatitis B is via three markers: Hepatitis B surface antigen, Hepatitis B surface antibody, and Hepatitis B core antibody.

For person exposed to Hepatitis A, 80 per cent effective prophylaxis can be obtained by the administration of

immune serum globulin within one to two weeks of exposure. For Hepatitis B, selective pooled Hepatitis B immune globulin is now available. It should be used within five days of known exposure.

The dental treatment of the patient with hepatitis requires careful planning. If the patient has active hepatitis, only palliative care should be given until the disease is under control. For patients with a history of hepatitis, dentists must determine, prior to therapy, the type of hepatitis, and the carrier state of the patient. If the patient has active hepatitis and requires emergency treatment or is a carrier of the virus, strict aseptic technique must be practised.^{18,19} It is essential that a rubber dam be used and that efforts be taken to minimize aerosols. Some authorities recommend that high-speed drills not be used and that ultrasonic prophylaxis units be avoided. All instruments should be debrided immediately following use, and sterilization of instruments and handpieces is important. The room should be disinfected following treatment of the patient. A recent report by the Center for Communicable Disease of the U.S. Public Health Service,²⁰ has suggested that through mechanical debridement of all instruments is the most important step in preventing the spread of hepatitis.

PREGNANCY

The pregnant patient requires special considerations in the planning and executing of dental treatment. The old adage "the loss of a tooth for each child" is certainly not appropriate to dentistry in the 20th century. Preventive dentistry should be emphasized, both by the dentist and the physician throughout the patient's pregnancy. The dentist should exercise discretion in the use of radiographs in dental treatment. Only those films considered absolutely necessary for proper dental care should be taken. With modern technique, including filtration, collimation of the beam, and the use of a lead apron for the patient, gonadal radiation should be below the measurable level. However, some radiation will undoubtedly reach the fetus and therefore only essential films should be taken. Similarly, medication prescribed for the patient should be minimal. Drugs which have been shown to be non-teratogenic by long clinical experience are preferable to newer medications. If antibiotics are required, penicillin or erythromycin should be prescribed. Sedatives and hypnotics should generally be avoided, so many of these have been shown to be teratogenic. Prior to prescribing any medication, the dentist should familiarize himself with possible teratogenic effects of the agent and should consult with the patient's obstetrician.

Careful treatment planning is necessary for dental care during pregnancy. In general, the second trimester is the best time for therapy. At this time the fetus is more developed than in the first trimester, and the patient is more comfortable. The danger of premature uterine contractions is less than during the third trimester. The supine

hypotensive syndrome has been described in patients with a gravid uterus, and it is important to have the patient rise slowly from the dental chair so as to avoid syncope. Elective procedures are best done in immediate postpartum period and should be scheduled appropriately.

Oral complications of pregnancy have been described. Pregnancy gingivitis is a recognized phenomenon and is probably related to hormonal abnormalities and to a decreased attention to gingival hygiene by the pregnant woman. Pregnancy tumors, an exuberant response of the gingival epithelium to inflammation, have also been reported. These lesions may regress following delivery, but if they do not they should be excised.

ALCOHOLISM

The alcoholic patient poses a special problem for the dentist.^{21,22} The alcoholic is generally defined as a patient who has the inability to control his consumption of alcohol. The patient may consume large amounts of alcohol, in spite of severe medical and/or psychologic problems. The dentist must identify the alcoholic patient and prepare an appropriate treatment plan based on the patient's alcoholism and related medical problems.

Certain pathologic conditions are more common in the alcoholic patient. It has been shown that the incidence of oral cancer is considerably higher in patients who use or consume large amounts of alcohol. The patient may also be prone to traumatic injuries of the oral cavity due to accidents occurring while intoxicated. Patients who neglect to have an adequate diet while drinking may show signs and symptoms of nutritional disturbances. Cirrhosis of the liver is a special problem in the alcoholic patient, and studies have recently shown that the cirrhosis is a direct result of alcohol toxicity. Patients with cirrhosis may reveal a delayed coagulation mechanism and may also have impaired healing, due to impaired production of fibrinogen. In the severely jaundiced patient, yellowish pigmentation may be seen in the oral cavity.

Several drug interactions are important in the alcoholic patient. Many proprietary medications contain alcohol, and these should be avoided in the patient prone to alcoholism. There is a potent additive effect of alcohol with various sedative, hypnotic, and tranquilizing medications and the dosage must be adjusted accordingly. Vasodilation will result from alcohol consumption and can, in turn, cause a decrease in blood pressure and an increase in the pulse rate.

Screening patients

Certain types of patients receiving medical therapy should have dental evaluations prior to commencement of treatment.²³ These patients include those receiving radiation therapy, chemotherapy, and those who are candidates for cardiovascular surgery. In each of these cases, all necessary dental treatment should be accomplished prior to the beginning of medical care. It is usually possible,

with modern dental techniques, to complete indicated dental treatment in a short period of time so as to not compromise the patient's medical condition for which the therapy is prescribed. The complications of oral surgery following radiation therapy of the head and neck have been described in the literature.^{24,25} Patients receiving chemotherapy are prone to mucositis but this can be reduced if the oral cavity is kept in a clean and healthy state. It is important for the dentist and the physician to collaborate and to prescribe dental care at the appropriate time for the patient.

REFERENCES

- 1 Little, J. and Falace, D., "Dental Management of the Medically Compromised Patient", Mosby, St. Louis (1980).
- 2 Hooley, J. and Daun, T., "Hospital Dental Practice", Mosby Co., St. Louis (1980).
- 3 Caccamo, L., "The Cardiovascular Patient: A Review of Pathophysiology and Dental Implications" *Special Care in Dentistry*, 1:88-91, (1981).
- 4 "Accepted Dental Therapeutics" American Dental Association, Council on Therapeutics, Ed. 38, Chicago (1979).
- 5 Little, J., "Dental Management of Patients with Surgically Corrected Cardiac and Vascular Disease", O.O.O., 50L 314-320, (1980).
- 6 Fischman, S., "Office Management of the Hypertensive Patient", J. Prev. Dent., 6:179-182 (1980).
- 7 Communicable Disease Center "Tuberculosis — United States, (1980)", *Morbidity and Mortality Weekly Report*, 30:55-56 (1981).
- 8 Communicable Disease Center "Tuberculosis Among Indochinese Refugees — United States, 1979", *Mortality Weekly Report*, 29:383-390, (1980).
- 9 Evans, B., "Dental Care in Hemophilia", National Hemophilia Foundation, NY 1977.
- 10 Evans, B. and Aledort, L., "Hemophilia and Dental Treatment", JADA 96:827-834, (1978).
- 11 Peterson, D., and Overholser, C., "Dental Management of Leukemic Patients", O.O.O., 47:40-42 (1979).
- 12 Powell, D. (ed.) "Recent Advances in Dental Care for the Hemophilic", Hemophilia Rehabilitation Center, Los Angeles (1979).
- 13 Alexander, R., "Hepatitis Risk: A clinical Perspective", JADA 102:182-185 (1981).
- 14 Communicable Disease Center "Health Status of Indochinese Refugees — Hepatitis B" *Morbidity & Mortality Weekly Report*, 28:464-470 (1979).
- 15 Moseley, Jos., et al., "Hepatitis B Virus Infection in Dentists", NEJM, 293:729-734, (1975).
- 16 Rothstein, S., Goldman, H.I. and Arcomano, A., "Hepatitis B Virus: An Overview for Dentists", JADA 102:173-176 (1981).
- 17 Shields, W., "Dentistry and the Issue of Hepatitis B", JADA, 102:180-182 (1981).
- 18 American Hospital Association, "Infection Control Guidelines: Hepatitis B Antigen Carriers", American Hospital Association, Chicago, 1975.
- 19 Rothstein, S. and Goldman, H., "Sterilizing and Disinfecting for Hepatitis B Virus in the Dental Operator", J. Clin. Prev. Dent., 2:9-14 (1980).
- 20 Communicable Disease Center, "Lack of Transmission of Hepatitis B to Humans after Oral Exposure to Hepatitis B Surface Antigen in Positive Saliva", *Morbidity and Mortality Weekly Report*, 27:247-248 (1978).
- 21 Becker, C., "Review of Pharmacologic and Toxicologic Effects of Alcohol", JADA, 99:494-500 (1979).
- 22 Shuckit, M., "Overview of Alcoholism", JADA, 99:489-493 (1979).
- 23 Sutherland, K., "Systemic Problems Affecting Dental Treatment", *Australian Dental Journal*, 23:140-145 (1978).
- 24 Beumer, J. and Brady, F., "Dental Management of the Irradiated Patient", *Int. J. Oral Surg.*, 7:208-220 (1978).
- 25 Helman, J., "Dental Care for the Irradiated Patient", *Dental Survey*, 55:40-46, (1979).

Plaque Control in the Handicapped:

The Treatment of Specific Plaque Infections

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ABSTRACT

Clinical studies have identified unique patterns of microbial species that can be statistically associated with dental caries, or gingivitis, or periodontitis. If caries and periodontal disease are due to a limited number of bacterial species, then a more realistic treatment approach would be the elimination and/or reduction of these odontopathic organisms from the plaque. This has great relevance for the dental management of handicapped individuals because the traditional mechanical debridement procedures are either ineffective or are cost inefficient. If the handicapped patient has active decay, the treatment regimen would stress fluorides, sucrose substitution with xylitol, sealants and professional cleanings, but would place little emphasis on oral hygiene instructions. If the patient had periodontal disease, then scaling and root planing is indicated as well as antimicrobial agents. Chlorhexidine, when given daily for short periods reduced both plaque and gingivitis sores. Kanamycin, when given weekly at four to five week intervals reduced plaque and gingivitis. Systemic antimicrobials such as metronidazole may be of value for the treatment of periodontitis.

INTRODUCTION

Dental diseases, such as dental caries and periodontal disease, are pathological host responses to the accumulation of bacteria on the dentogingival surfaces. These bacterial aggregates are known as dental plaque, and much of the effort on the part of the prevention-oriented dental community is to control the accumulation of this plaque. This has proved to be very difficult to accomplish using mechanical debriding methods such as toothbrushing and flossing. There is now unequivocal evidence that this mechanical approach is of little value in caries control^(1,2) but has merit in the prevention of gingivitis⁽³⁾. This has great relevance to the prevention of caries in handicapped individuals, as procedures which are of little value or

which are cost-inefficient in the normal population, should not be instituted in the handicapped.

The divergence in treatment benefits derived from mechanical procedures is consistent with the separate microbial etiology of dental decay and periodontal disease. The microbial composition of plaque is variable within finite limits. Thus while plaque on different teeth in the same mouth, or on teeth in different mouths may show significant bacteriological differences between each other, the microbial cast of species is finite, so that after sampling a limited number of plaques, all of the predominant genera or species are usually encountered. As such, it is appropriate to consider the dentition as supporting or having an indigenous, albeit complex, plaque flora⁽⁴⁾. This complexity had led many investigators to believe that no meaningful distinctions or patterns existed in the plaque flora.

Accordingly, plaque or plaque accumulation *per se* was regarded as the etiologic agent of both dental caries and periodontal disease, i.e. the non-specific plaque hypothesis⁽⁵⁾. This hypothesis appears to be invalid, as when plaque samples were removed from discrete tooth sites that were healthy or diseased, cultured using suitable dispersal procedures and anaerobic environments, and the isolated identified, unique patterns or clusters of microbial species could be statistically associated with dental caries, gingivitis and periodontitis^(5,6,7). *In vitro* and animal studies have demonstrated that certain carbohydrate-fermenting species such as *S. mutans*, lactobacilli, and *Actinomyces viscosus* cause dental decay. A completely different group of organisms that include the various spirochetal species, black-pigmented bacteroides species such as *B. gingivalis*, *B. melaninogenicus* ssp. *intermedius* and others (Table 1) have the capability of causing periodontal inflammation and bone loss. This array of specific odontopathic organisms permits the formulation of the specific plaque hypothesis^(5,8) which provides new treatment strategies and tactics.

If caries and periodontal disease are due to a limited number of bacterial species, then a more realistic treatment approach would be the elimination or reduction of the pathogenic bacteria from the plaque. Treatment need be only for a short duration in those patients diagnosed as having an infection. Diagnosis becomes the essential entry criteria for treatment. If the subjects have a non-diseased associated plaque as determined clinically by the absence of decay, pockets, or bleeding gingivitis, no treatment is warranted (Table 1). If the patient has active decay, low salivary flow and/or a recent history of frequent sucrose ingestion, then preventive treatment is warranted. Under ideal circumstances, the clinical diagnosis would be confirmed by the bacteriologic demonstration of high levels of *S. mutans* and/or lactobacilli in the saliva or plaque.

The patient would be put through a treatment regimen that would stress fluorides, sucrose-restriction, sealants and professional cleanings, but would place little effort on

oral hygiene instructions (Table 1). If the patient has active periodontal disease complete with bleeding gingiva and pockets that bleed upon probing, then periodontal scaling and root planing are required. Antimicrobial agents can be employed for short periods of time in order to suppress the periodontopathic flora. In this situation, bacteriological criteria such as microscopic examination of plaque⁽⁹⁾ or cultural analysis⁽¹⁰⁾ should be performed. Agents such as fluoride or possibly chlorhexidine could be used daily or frequently to prevent plaque accumulation. The patients should be given oral hygiene instruction (Table 1).

The treatment tactics listed in Table 1 are different in emphasis from those normally associated with prevention. These tactics are based upon concepts that are consistent with the recent biological understanding of dental diseases. An example in this regard is the repeated demonstration that *S. mutans* and sucrose interact in unique

Table 1
Clinical and Bacteriological Findings in Various Plaque Infections and Treatment Tactics

Plaque Diagnosis	Clinical Features	Bacteriological Findings	Treatment
Cariogenic	Active Decay	<i>S. mutans</i>	1. Fluoride Water Topical dentifrice daily gels — daily varnish — at intervals 2. Mechanical Professional prophylaxis once or twice a month using fluoride pastes 3. Sucrose restriction between meals 4. Snacks sweetened with Xylitol & Sorbitol 5. Sealants on caries prone fissures
	Low Salivary Flow	lactobacilli	
	Frequent Sucrose Ingestion.		
Periodontopathic	Bleeding gingiva	Spirochetes	1. Periodontal scaling and root planing 2. Antimicrobials a) Short-term usage systemic — metronidazole topical — kanamycin - Daily usage fluoride chlorhexidine? 3. Mechanical debriding a) Oral hygiene instructions
	Pockets	Black pigmented bacteroides	
	Plaque and Calculus accumulation	motile bacteria	
	Bad breath	<i>Actinomyces viscosus</i> <i>Clostridia</i> sp. collagenolytic bacteria	
Nondisease	No decay	<i>S. sanguis</i>	Leave alone
Associated Plaque	No pockets No bleeding	<i>S. mitior</i> actinomyces <i>Veillonella</i> sp.	

ways on the tooth retentive sites to cause enamel demineralization. There is no plaque mass or bulk component in this interaction and accordingly, debridging procedures which can not clean pits, fissures and areas below contact points should be of little preventive value. This has been amply demonstrated. There is no published evidence that tooth brushing or flossing prevents or reduces decay. Toothbrushing with a fluoride dentifrice reduces decay about 20 percent but this is a fluoride effect^(5,15). When oral hygiene instructions were given⁽¹¹⁾, or when toothbrushing was supervised⁽¹⁾, or when flossing was supervised^(1,2), there was either no reduction in caries or the reduction was so minimal as to be insignificant and highly cost inefficient.

Procedures of such minimal preventive value in the nonhandicapped population should not be advocated as a caries control method for handicapped individuals. In fact, a study of handicapped children demonstrated that the children who had their teeth brushed most often had the highest decay activity⁽¹²⁾. There is no evidence that certain forms of mental retardation confers a resistance to dental decay⁽¹³⁾. Those individuals who live in an institution would have a low incidence because of their restricted access to sucrose, especially between meals; their lower chances of becoming infected with *S. mutans*; and possibly the medical usage of antibiotics which could suppress a cariogenic flora⁽¹⁴⁾. As these individual leave the institutional environment, they will come in greater contact with *S. mutans* and sucrose. Accordingly, an increased caries incidence would be expected. The dental profession should be prepared for this challenge, using one or more of the treatment tactics listed in Table I.

PREVENTIVE TREATMENT — CARIES

Fluoride

The most cost efficient anticaries procedure is the daily exposure to the low level of fluoride that is found in fluoridated water supplies⁽¹⁵⁾. If the handicapped individual does not live in a fluoridated community, he should be given 1 mg fluoride tablets daily and only fluoride dentifrices should be used. If an individual is being deinstitutionalized and brought into a small group or family setting where active decay is known to exist, then it may be desirable to place the entire group on some form of topical fluorides during the period of adjustment. This is to prevent or minimize the possibility of the new member acquiring *S. mutans* or other cariogenic organism from his companions. Although the precise means by which individuals acquire *S. mutans* is not known, there is evidence that the infection in the neonate is transmitted by the mother shortly after the teeth erupt^(16,17). This transmission can be reduced if the mother who harbors high levels of *S. mutans* is given frequent fluoride and mechanical prophylaxis⁽¹⁸⁾. By analogy, the new member of the household will be experiencing a new environment where

his diet and eating habits may change, and this could favor colonization of the teeth by organisms from another individual. If so then appropriate usage of fluoride by the other household members may minimize the possibility of a *S. mutans* colonization. The individual in question could be treated daily with fluoride gels or with fluoride varnishes during the first few weeks after his arrival.

Mechanical

Studies in Sweden have shown that frequent mechanical prophylaxis with fluoride pastes given at two week intervals to caries prone children⁽¹⁹⁾, or at two month intervals to adult patients⁽²⁰⁾ can stop the development of both dental decay and periodontal disease. This appears to be the definitive treatment and if this regimen can be implemented in the handicapped, presumably no further dental problems would exist. This solution however requires many well staffed dental clinics that are conveniently located in the community. It is not realistic to expect such a clinic situation to become available for the treatment of handicapped individuals. Note that while mechanical debridement plus fluoride was effective, this was professionally delivered. This is in no way comparable to patient self-debriding with a toothbrush and floss.

Sucrose Restriction and Sucrose Substitution

The reward for good performances by children often consists of the provision of a candy or similar sweet-tasting treat. Yet this practice of between-meal eating of high sucrose candies or snacks is the most cariogenic aspect of the diet that is known⁽²¹⁾. This pattern of reward for good behavior could be exaggerated when a handicapped child lives at home or when a handicapped person is deinstitutionalized. It could account for the well-documented higher caries activity found in noninstitutionalized children^(22,23). This behavior modification system with its inherent rewards for both the preceptor and subject can be kept intact by the simple substitution of products that are sweetened with xylitol or mannitol-sorbitol.

Mannitol-sorbitol are hexitols which are about one half as sweet as sucrose. They are widely used as sucrose-substitutes in sugarless gums and other products. Xylitol is a pentitol which has a sweetness comparable to sucrose. It is a relatively new sweetener that has been extensively evaluated for safety and caries reduction in Turku, Finland⁽²⁴⁾. In one study, young adults who consumed one package of xylitol-sweetened gum per day for a year had about 90 percent less decay than a control group who consumed one package of a sucrose-sweetened gum per day⁽²⁵⁾. There was no restriction of sucrose at meal times in either group. Thus the dietary intervention was minimal and the reduction in caries impressive.

Xylitol-containing candies and chewing gums are becoming widely available and should be substituted for sucrose-containing products. In some countries, chewing

gums containing both xylitol and fluoride are available and would be recommended for consumption in regions where there is no water fluoridation. Excessive usage of xylitol, as well as mannitol-sorbitol, will cause a transient diarrhea.

Sealants

Certain teeth that have deep fissures can be protected from caries by the placement of plastic polymers or sealants. The sealants have to be placed in a dry field and require the same exacting clinical performance as would an amalgam. Their usage in handicapped individuals should be based upon the number of teeth with deep fissures that are present in the mouth and the caries risk of the patient.

SUMMARY — PREVENTIVE CARIES CONTROL

The use of xylitol and fluoride containing products offer the most convenient and most effective means of preventing new caries incidence in handicapped children. When the caries activity or caries risk is great, then the more frequent usage of prescription levels of fluoride is recommended. In these cases, the fluoride is delivered under professional supervision. Oral hygiene instruction, while of value in the control of gingivitis, is of little benefit in caries control.

Preventive Treatment — Periodontal Disease

The handicapped individual accumulates plaque and calculus and usually exhibits some form of periodontal disease as well as mouth malodor. Most oral hygiene programs are orientated towards controlling this periodontal problem, but alas are ineffective, despite electric toothbrushes and specially designed toothbrushes⁽²⁵⁾. Thus while mechanical debridement is conceptually valid for periodontal health, the traditional means for achieving this goal are frustrated by the handicapping condition. Again, some hope for future control seems possible given the findings of microbial specificity in certain forms of periodontal disease. The treatment strategy in this case would be to eliminate and/or suppress the periodontopathic organisms in the plaque. A brief review of these approaches follows.

Periodontal scaling and root planing initially and at periodic intervals of two to four months should be adequate to establish and maintain periodontal health⁽²⁷⁾ in handicapped individuals. This labor intensive approach is cost inefficient and beyond the delivery capabilities of most clinics which serve the handicapped. Also the dentists most involved in the treatment of the handicapped are specialists in restorative dentistry and not periodontology. Therefore this traditional approach is not realistic.

Antimicrobials

The accumulation of plaque can be reduced and the microbial composition of plaque can be changed by the

judicious usage of chemical antimicrobial agents. Dentists are neither well educated nor trained in the usage of antimicrobials, and accordingly are reluctant to use them in situations where they have been taught that mechanical procedures will suffice. This means that in the case of the handicapped, cost-efficient treatment approaches based upon the usage of antimicrobials may be ignored or neglected.

Antimicrobials should be used in patients with a diagnosed infection and only for a time period long enough to control or eliminate the infection. A considerable amount of empirical data will be needed to determine the optimal drug, the optimal dosage and the length of treatment for periodontal infections. This problem has been addressed by seeking antimicrobials which 1) are broad spectrum and have an unusual persistence on the dentogingival surfaces, i.e. chlorhexidine; 2) are specific for the anaerobic members of the flora, i.e. metronidazole; 3) have desirable organoleptic properties, i.e. kanamycin.

Chlorhexidine

Chlorhexidine is a bisbiguanide antiseptic that has a remarkable *in vivo* ability to prevent supragingival plaque⁽³⁾. Chlorhexidine adsorbs to the oral surfaces, including the teeth, and then is slowly released in an active form⁽²⁸⁾. It is an effective and apparently safe antimicrobial agent, whose only known disadvantage is the development of a brown-black stain on the teeth with continued usage. The agent has been evaluated at several dosages and with several delivery systems in handicapped individuals (Table 2). In all studies the agent was given daily in the hopes of controlling plaque and gingivitis, i.e. treatment was according to the non-specific plaque hypothesis.

When chlorhexidine was used for short periods of time there was an impressive reduction in plaque scores but only a modest albeit significant improvement in gingivitis scores (Table 2). In the one investigation in which the treatment period extended for six months, there was a minimal improvement in the gingivitis score⁽³³⁾. In this investigation, a one percent chlorhexidine gel was brushed on the teeth daily. A decrease in the gingivitis score occurred in the first three months of treatment, but thereafter this effect disappeared so that after six months the difference between the placebo and chlorhexidine groups was only 15 percent. This suggests that the improvement noted in the short-term studies would not have persisted if the treatment periods had been extended. The inability of chlorhexidine to maintain the treatment effect could mean that organisms resistant to chlorhexidine had been selected for (*S. sanguis*, *capnocytophaga* sp.), and that these organisms were as capable of causing gingivitis as the original plaque flora. This would suggest that chlorhexidine used on a daily basis for extended periods of time may have limited usage in handicapped individuals. This does not preclude the fact that chlorhexidine used in a

Table 2
Ability of Various Chlorhexidine Preparations to Reduce Gingivitis in Handicapped Individuals

Reference	Delivery	Clinical Result	Comments
Lesser & Gelbier	0.2% Chx ^a mouthrinse 5 times/wk for 1 mo	GI went from 1.03 to 0.67 no. = 24 subjects	No placebo Not severe gingivitis
Usher	0.5% Chx gel applied daily for 3 weeks using trays	Chx GI went from 1.02 to .76 Quinine GI went from 0.92 to 1.03 Difference between treat- ments significant no. = 40 subjects	Quinine as placebo; cross- over design with no break between treatments; not severe gingivitis
Dever	0.2% Chx spray given daily for 3 weeks	Chx GI went from 2.17 to 1.84 Quinine GI went from 1.78 to 1.56 no. = 32 subjects	Quinine as placebo; cross- over design; Chx group showed significant reduction; no comparison with placebo; Severe gingivitis
Russell and Bay	1.0% Chx Tooth- brushing once daily for 2 mos.	Chx GI went from 1.14 to 0.91 Placebo GI went from 1.07 to 0.97 no. = 30 subjects	Crossover design; significant difference between groups
Cutress et al.	1% Chx gel brushed on teeth daily for 30 sec. over a 6- month period	15% improvement Chx GI went from 1.05 to .95 Quinine GI went from 1.08 to 1.13 no. = 177 subjects	Quinine as placebo; early improvement in Chx disappeared with time; prior scaling; not severe gingivitis
a) Chx = chlorhexidine			

different treatment schedule would not be clinically useful. This point was demonstrated in studies involving Kanamycin.

Kanamycin

Kanamycin is an aminoglycan antibiotic which is not absorbed, has no objectionable taste, and is extremely stable. Because of these characteristics, a topical Kanamycin preparation was tested as a means of controlling plaque and gingivitis in institutionalized mentally retarded children^(35,36). However, instead of treating individuals on a daily basis, a treatment schedule was followed in which the patients received a five percent Kanamycin paste three times daily for only a five day period.

This schedule was used to test the hypothesis that the plaque overgrowth and gingivitis found in these children was an abnormal condition due to the proliferation of odontopathic organisms. If these organisms could be suppressed or eliminated from the plaque by a short intensive treatment period, then other organisms present in the saliva could recolonize the teeth and establish a plaque flora of lower virulence⁽³⁷⁾.

In order to isolate this Kanamycin effect, all oral hygiene procedures were suspended in a group of non trisomy 21 children. This was deemed ethically permissible because the daily toothbrushing performed by the ward attendants had been ineffective in controlling plaque and gingivitis in these patients. The patients were given a mechanical prophylaxis and allowed to go four weeks without oral hygiene. They were then separated into placebo and Kanamycin groups and Orabase (placebo) or Orabase with five percent Kanamycin was applied with a cotton swab to the buccal labial surfaces of all teeth in the morning, afternoon and evening of 5 consecutive days. There was an immediate reduction in plaque accumulation and in gingivitis scores which persisted for several weeks after completion of the antibiotic treatment. Thus after eight weeks of no brushing and 24 days after the last application of the pastes, the plaque weight in the Kanamycin group was 62 percent of the pre-treatment value, whereas in the placebo group the plaque weight was 162 percent of the initial value (**Table 3**). The gingivitis exhibited a clinical improvement, but this was not demonstrable by the gingivitis score used (**Table 3**).

The five-day treatment with the Kanamycin had both an immediate and a residual effect on plaque that lasted between four and eight weeks. This raised the question as to what effect retreatment at frequent intervals would have on maintaining the oral health of these subjects.

Accordingly, a second study involving institutionalized trisomy 21 patients was initiated in which the Kanamycin or placebo pastes was reapplied at five week intervals⁽³⁶⁾. The protocol was as before, with a scaling and cleaning given five weeks prior to the Kanamycin or placebo treatments, and all oral hygiene procedures were suspended.

Kanamycin or placebo was given in the morning and evening of five consecutive days. Five weeks later the plaque weight was reduced about 50 percent from starting values in the Kanamycin patients but had increased in the placebo patients (Table 3). Nine applications of paste were given over a five day period and again five weeks later (15 weeks of no oral hygiene), the plaque weight was still significantly reduced in the placebo group. At this time the gingivitis scores in the Kanamycin group were significantly lower than those observed in the placebo group. The placebo patients were then switched to the Kanamycin because of an ethical concern that their gingivitis would deteriorate further if their teeth were left unbrushed and

untreated. The children continued to be retreated at five week intervals, with the number of applications of Kanamycin being reduced until a maintenance level of one application on each of three consecutive evenings on every fifth week was empirically determined. Photographs taken after 40 weeks of no brushing revealed that the supragingival plaque accumulations were minimal and the gingivitis was not severe (Figure 1). These photographs show the patient with the best clinical response on the left and a patient with a more typical response on the right. After 45 weeks of no oral hygiene, the Kanamycin treatment was omitted and within seven weeks the plaque weights and gingivitis had returned to or surpassed baseline values.

Gingivitis Scores

The improvement in the gingivitis seen clinically and in the photographs was not documented by the gingivitis scoring method that was used (Table 3). Chlorhexidine also had been unable to reduce gingivitis appreciably as assessed by the gingival index. This suggested that the clinical indices that had been developed to describe early stages of gingivitis in nonhandicapped individuals could not accurately monitor changes in gingival inflammation

Table 3
Effect of Short-Term Kanamycin Treatment on Plaque Weight and Gingivitis in Mentally Retarded Institutionalized Children. Values Shown are a Percent of Initial Values.

Patients	Week of No Oral Hygiene	Plaque		Gingivitis	
		Kanamycin	Placebo	Kanamycin	Placebo
No Trisomy -21	4	100% (3.9) ^a	100% (3.2) ^a	100% (2.2) ^b	100% (2.7) ^b
	8 k or p for 5 days	62%	← d → 162%	95%	107%
	12	102%	137%	114%	96%
Trisomy-21	5 K or p for 5 days	100% (2.8) ^c	100% (3.6)	100% (1.5) ^b	100% (1.7) ^b
	10	48%	← d → 114%	87%	106%
	15	66	← d → 108	80%	← d → 118%
	20	62	44	87	106
	30	38	36	75	94
	40	36		103	93
	45	39		110	92
			Stopped all Treatment		
	52	103		130	

a) Dry weight for 6 representative teeth prior to treatment.

b) Gingivitis score score prior to treatment.

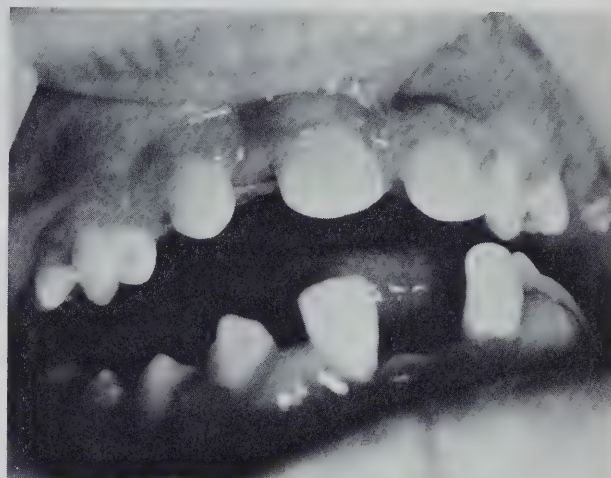
c) Wet weight per representative tooth prior to treatment.

d) Values connected by arrows are significantly different.

Adapted from data given in references.

FIGURE 1.

Down's Syndrome patients after 40 weeks of no oral hygiene. A 5% kanamycin-orabase paste was applied every fifth week by means of a cotton applicator. Patient at left was the best appearing patient in the group, while patient on right was typical of the group. Note minimal amount of supragingival plaque.



of the magnitude encountered in these handicapped individuals. It is obvious that the degree of improvement observed in going from a spontaneous bleeding, (a score of three), to bleeding upon probing, (a score of two), is not biologically equivalent to the improvement encountered in a change from a reddened gingiva, (a score of one), to a pink gingiva, (a score of zero). Yet statistically, these are equivalent changes. This insensitivity of the scoring method at the diseased end of the spectrum led us in subsequent investigations to expand the upper limit of the gingivitis score so as to take advantage of the information provided by the magnitude and the rapidity of gingival bleeding⁽⁸⁾. In hindsight most of these institutional patients would have had initial gingival bleeding scores of five, which as a result of the Kanamycin treatment would have improved to about two to three. Yet even this bleeding index may not be sensitive enough to reflect adequately the gingival conditions in handicapped individuals. Thus in future studies involving chlorhexidine, Kanamycin or other antimicrobials it may be necessary to develop a gingivitis measurement that can accurately describe the advanced gingivitis observed in these institutionalized handicapped individuals.

Systemic Antibiotics

The persistent gingivitis observed with the topical agents could reflect the inability of either the chlorhex-

idine or Kanamycin to penetrate into the gingival pocket to suppress the residual odontopathic flora therein⁽¹⁰⁾. These organisms were beyond the treatment zone of the delivery system and could continue to fester a subgingival infection that could progress into, if it already was not, periodontitis. In order to get access to these subgingival plaque organisms, mechanical debridement, or surgery, or a systemic antimicrobial was necessary either alone, or in combination. The mechanical debridement-surgical approaches are classical treatments which are eminently valid in this situation, but they are beyond the delivery capability of most dental centers treating the handicapped and certainly prohibitive from the economic aspect. The usage of systemic antibiotics is also valid in this situation, and extremely attractive from a cost-efficiency perspective. Antibiotics can be given so as to maintain a 24-hour inhibitory level of agent in the periodontal pocket. What is needed is a thorough understanding of the available agents and their spectrum of activities against the periodontal pathogens.

Numerous bacteriological studies have documented the anaerobic nature of the periodontal flora^(5,7), but until recently, there were few systemic antibiotics that were known to have an antimicrobial spectrum that included anaerobes. In the early 1960s Shinn⁽³⁸⁾ observed that short-term treatment with metronidazole (Flagyl®) dramatically cured cases of acute necrotizing ulcerative gingivitis.

This led to studies which demonstrated that metronidazole has unusual activity against anaerobic organism⁽³⁹⁾ such as spirochetes and *B. gingivitis* that are predominant in acute lesions of periodontitis⁽¹⁰⁾. When a few patients with advanced periodontal disease were treated for one week with systemic metronidazole and no mechanical debridement, the levels and proportions of these anaerobic organisms decreased in the plaque for six or more months following treatment. The pocket depths in the most advanced sites decreased by two mm or more and their was an apparent gain in attachment of one mm⁽¹⁰⁾.

These preliminary findings suggest that metronidazole may be of value in the treatment of periodontitis. If so, then the judicious usage of this drug may prove to be the cost-efficient treatment modality that is essential for the management of periodontal disease among handicapped individuals.

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REFERENCES

- Horowitz, F.J., Suomi, J.D., Peterson, J.K. and Lyman, A.B. Effects of supervised daily dental plaque removal by children. II, 24 month's results. *J. Public Health Dent.* 37:180-188, 1977.
- Granath, L.E., Martinsson, T., Matsson, L., Nilsson, G., Schroder, V. and Soderholm, B. Intra-individual effect of daily supervised flossing on caries in school children. *Community Dent. Oral Epidemiol.* 7:147-150, 1979.
- Loe, H. Human research model for the production and prevention of gingivitis. *J. Dent. Res.* 50:256-262, 1971.
- Bowden, G.H.W., Ellwood, D.C. and Hamilton, I.R. Ch in *Advances in Microbial Ecology*. 3:135-217, 1979. M. Alexander ed. Plenum Publishing Corp.
- Loesche, W.J. Chemotherapy of dental plaque infections. *Oral Sci. Rev.* 9:65-105, 1976.
- Loesche, W.J. and Straffon, L.H. Longitudinal investigation of the role of *Streptococcus mutans* in human fissure decay. *Infect. Immun.* 26:498-507, 1979.
- Slots, J. Subgingival microflora and periodontal disease. *J. Clin. Periodontol.* 6:351-382, 1979.
- Loesche, W.J. Clinical and microbiological aspects of chemotherapeutic agents used according to the specific plaque hypothesis. *J. Dent. Res.* 58:2404-2412, 1979.
- Listgarten, M.A. and Hellden, L. Relative distribution of bacteria at clinically healthy and periodontally diseased sites in humans. *J. Clin. Periodontol.* 5:115-132, 1978.
- Loesche, W.J., Syed, S.A., Morrison, E.M., Laughon, B.E. and Grossman, N.S. The treatment of periodontal infections due to anaerobic bacteria with short-term metronidazole. Case reports of five patients. *J. Clin. Periodontol.* 7, 1981.
- Melsen, B. and Agerbaek, N. Effect of an instructional motivation program on oral health in Danish adolescents after 1 and 2 years. *Community Dent. Oral Epidemiol.* 8:72-78, 1980.
- Nowak, A.J. The effect of dietary and brushing habits on dental caries in noninstitutionalized handicapped children. *J. Dent. Handicap.* 3:15-19, 1977.
- Tesini, D.A. An annotated review of the literature of dental caries and periodontal disease in mentally retarded individuals. *Special Care in Dentistry.* 1:75-87, 1981.
- Handelman, S.L., Mills, J.R. and Hawes, R.R. Caries incidence in subjects receiving long-term antibiotic therapy. *J. Oral Ther. Pharm.* 2:338-344, 1966.
- Burt, B.P. The relative efficacy of methods of caries prevention in dental public health. *Proceedings of a workshop at the University of Michigan.* p. 305, 1978.
- Berkowitz, R., Jordan, H. and White, G. The early establishment of *Streptococcus mutans* in the mouths of infants. *Arch. Oral Biol.* 20: 171-174, 1975.
- Kohler, B. and Bratthall, D. Intrafamilial levels of *Streptococcus mutans* and some aspects of the bacterial transmission. *Scand. J. Dent. Res.* 86:35-42, 1978.
- Bratthall, D. Selection for prevention of high caries risk groups. *J. Dent. Res.* 59: D II:2178-2182, 1980.
- Axelsson, P. and Lindhe, J. The effect of a plaque control program on gingivitis and dental caries in school children. *J. Dent. Res.* 56: Spec. Iss. C. C142-148, 1977.
- Axelsson, P. and Lindhe, J. Effect of controlled oral hygiene procedures on caries and periodontal disease in adults. *J. Clin. Periodontol.* 5:133-151, 1978.
- Gustafsson, B.E., Quensel, C.E., Lanke, L., Lundquist, C., Grahnen, H., Bonow, B.E. and Krasse, B. Vipeholm dental caries study on the literature on carbohydrates and dental caries. *Acta. Odont. Scand.* 11:232-356, 1954.
- Butts, J.E. Dental status of mentally retarded children. A survey of the prevalence of certain dental conditions in mentally retarded children in Georgia. *J. Public Health Dent.* 27:195-211, 1967.
- Cutress, T.W. Dental caries in trisomy 21. *Archs. Oral Biol.* 16:1329-1344, 1971.
- Scheinin, A. and Makinen, K.K. Turku Sugar Studies I-XXI. *Acta. Odont. Scand.* 33: Suppl. 70, 1975.
- Scheinin, A., Makinen, K., Tammisola, E. and Rekola, M. Turku sugar studies XVIII. Incidence of dental caries in relation to 1-year consumption of sucrose and xylitol chewing gum. *Acta. Odont. Scand.* 33:35, 1975.
- Nowak, A.J. Dentistry for the handicapped patient. St. Louis, C.V. Mosby Co. 167-192, 1976.
- Knowles, J.W., Burgett, F.G., Nissle, R.R., Shick, R.A., Morrison, E.C. and Ramfjord, S.P. Results of periodontal treatment related to pocket depth and attachment level. *J. Periodontol.* 50:225-233, 1979.
- Rolla, G., Loe, H. and Schiott, R. Retention of chlorhexidine in the human oral cavity. *Archs. Oral Biol.* 16:1109-1115, 1971.
- Lesser, S.P. and Gelbier, S. A preventive measure for mentally handicapped: mouthrinsing with chlorhexidine. *Dent. Health* 12:15-17, 1973.
- Usher, P.J. Oral hygiene in mentally handicapped children. *Br. Dent. J.* 138:217-222, 1975.
- Dever, J.G. Oral hygiene in mentally handicapped children. A clinical trial using a chlorhexidine spray. *Austral. Dent. J.* 24:301-305, 1979.
- Russell, B.G. and Bay, L. Oral use of chlorhexidine gluconate toothpaste in epileptic children. *Scand. J. Dent. Res.* 86:52-57, 1978.
- Cutress, T.W., Brown, R.H. and Barker, D.S. Effects on plaque and gingivitis of a chlorhexidine dental gel in the mentally retarded. *Community Dent. Oral Epidemiol.* 5:78-83, 1977.
- Emilson, C.G. and Fornell, J. Effect of toothbrushing with chlorhexidine gel on salivary microflora, oral hygiene, and caries. *Scand. J. Dent. Res.* 84:308-319, 1976.
- Loesche, W.J., Green, E., Kenney, E.B. and Nafe, D. Effect of topical kanamycin sulfate on plaque accumulation. *J. Amer. Dent. Assoc.* 83:1063-1069, 1971.
- Loesche, W.J. and Nafe, D. Reduction of supragingival plaque accumulations in institutionalized Down's syndrome patients by periodic treatment with topical kanamycin. *Archs. Oral Biol.* 18:1131-1143, 1973.
- Loesche, W.J., Hockett, R.N. and Syed, S.A. Reduction in proportions of dental plaque streptococci following topical kanamycin treatment. *J. Periodontal Res.* 12:1-10, 1977.
- Shinn, D.L.S. Metronidazole in acute ulcerative gingivitis. *Lancet* 1:1191, 1962.
- Sutter, V.L. and Finegold, S.M. *In vitro* studies with metronidazole against anaerobic bacteria. In *Metronidazole*. S. Finegold Ed. *Excerpta Medica* 279-285, 1976.

Delivery of dental care to the disabled

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ABSTRACT

The successful delivery of dental care to disabled persons requires the availability of qualified dental professionals, motivated patients and an adequate support system. Means of increasing accessibility to care include dental training programs, community outreach and the marshalling of available resources. The mode of care delivery must be determined in terms of individual patient and group needs. In general, few adaptive aids are required; for "mobile" dentistry a series of portable units offers optimum flexibility. A systematic and interdisciplinary approach to care, based on understanding and consideration for the patient's special needs are of prime importance in ensuring a quality dental service for the disabled patient.

INTRODUCTION

Dentistry for the disabled patient encompasses as broad and diverse an area of oral health care as the range of dental problems and disabling conditions manifest in the population-at-large. In discussing the delivery of dental care to the disabled, this paper will deal with some of the general programmatic and psychosocial factors which play an important role.

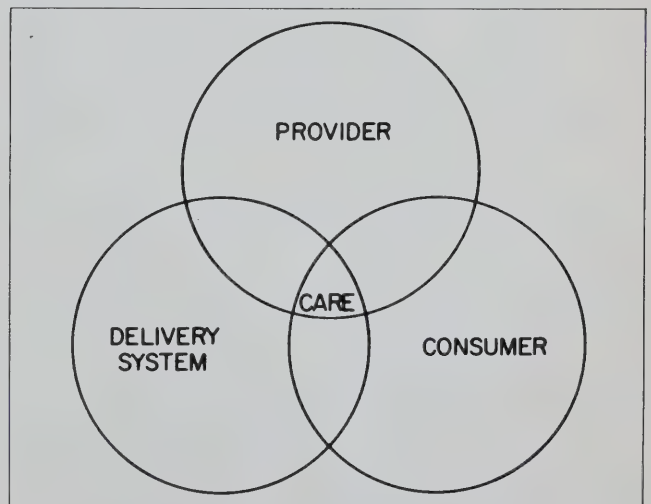
It is generally accepted that many persons with disabilities have extensive dental needs which, for a variety of reasons, have not been adequately met.¹ Results of a survey of patients treated in the program of Dental Education in Care of the Disabled (DECOD) at the University of Washington, are indicative of the typical barriers experienced. Of the 73 patients responding to the survey, 53 patients (73 per cent) stated they had not received dental care on a regular basis in the past. Their responses confirm

frequently cited reasons for dental neglect: inability to locate a dentist willing to perform treatment, financial and transportation difficulties, lack of motivation and fear.

It is therefore evident that if adequate dental care for the disabled patient is to be accomplished, it will necessitate a provider who is qualified and willing to supply the care needed, a consumer who is willing and able to receive the service, and a system which is feasible for bringing the two together. Each aspect of the issue will be considered separately, but the close interrelationship of the three components will be stressed; only when all three interact maximally will the delivery of dental care to the disabled patient be successful. (Fig. 1)

Provider Availability

The rights of disabled individuals to have the same opportunity as non-disabled persons to partake of health services, including dental care, are becoming universally



1. Component factors in the delivery of dental care to the disabled patient.

recognized; in the United States non-discrimination is guaranteed by the Rehabilitation Act of 1973. Yet recent surveys reveal that only 20-30 per cent of dentists state a willingness to accept handicapped persons as patients.^{2,3} For specialists such as pedodontists and oral surgeons, who as part of their training have gained experience in treatment of the disabled patient, the percentage is considerably higher.²⁻⁶

Confidence in the ability to treat a given patient appears to be a major determinant in the decision to provide care for that patient.⁷ Such confidence is gained through knowledge and clinical experience. The value of specific training in enhancing practitioner knowledge and experience forms the rationale for the growing number of instructional programs at both the undergraduate and graduate level in care of the disabled.^{1,8}

It is not enough, however, to implement a nominal change in the dental curriculum. The instructional objectives must stress the development of awareness and sensitivity to the concerns and special needs of persons with disabilities. Will the student practitioner indeed learn to consider the patient as a person first, and the disability as secondary? Will she/he treat the patient with the same dignity, respect and professional demeanor accorded all patients in the practice? Will she/he recognize that appointments must be carefully planned around the disability? Some disabled persons function best early in the morning, whereas others require several hours of preparation prior to coming to the dental office; for some, sitting tolerance is circumscribed; for many, arrangements for dental visits are complex and costly. Will the dental provider communicate directly with the patient, not with an accompanying person, at a level commensurate with the patient's intellectual capacity, neither grossly underestimating nor overestimating the patient's ability to comprehend? Is she/he able to relate appropriately not only to the patient but to the patient's family and all those involved in the patient's care? Counselling, guiding the patient to essential services and co-ordinating dental procedures with other therapies may all need to be incorporated into the treatment plan.

These few examples serve to illustrate the degree of understanding for the patient's condition which the dental practitioner must achieve if she/he is to be successful in the treatment of the special needs patient. Empathy is a state of mind which cannot be legislated. However, certain approaches may help faculty and students in an instructional setting attain a higher level of sensitivity. Since faculty may indeed trail students in motivation to treat patients with disabilities,⁹ in-service training must be

encouraged. The inclusion of qualified and personable disabled individuals as guest lecturers is another method which, in our program, has proven highly effective.

While much of the emphasis in training has been placed on expanding the pool of qualified dentists, equal urgency is needed to increase the number of trained dental hygienists and assistants. Auxiliaries play a vital role in the delivery of care to the disabled patient.¹⁰ Oral hygiene is clearly a major problem for many disabled persons and is an area in which the dental auxiliary must work actively with both patient and patient caretaker.¹¹

Moreover, it is the assistant who is usually the first person to establish contact with the disabled patient, in the office or by telephone, and who thus sets the tone for the entire dental experience. Not only can the assistant be a valuable aide at chairside in patient management, but it is frequently also his/her task to act as a liaison with social service agencies, to institute referrals, to follow up on patient care and provide patients with the encouragement, support and personal attention they frequently need.

Consumer Availability

In addition to the specific disabling condition, the patient will present with the general encumbrances which that condition has placed on his/her existence. The various attitudinal, physical, economic and social problems which the patient may be experiencing may significantly affect the patient's ability or desire to participate in dental treatment.

Lack of physical access and inability to pay for treatment are two major obstacles to care. Disabled persons frequently are dependent on others for transportation. Their limitation in mobility increases with age and not surprisingly is inversely related to income.¹² The effect on utilization of dental services is substantial. Thus, in a survey of homebound patients (269 respondents) we found a strong positive correlation between the ability of patients to go to the dentist and the time elapsed since the last dental visit.¹³

An added difficulty is that many dental offices are not designed for persons who have severe ambulation problems or are in wheelchairs. The patient who has recently lost the use of his legs through trauma or disease, may suddenly discover that the familiar dental office which he has visited for many years has become completely inaccessible to him because it is on the upper level of a building without an elevator.

Dentistry is usually considered an elective health care service and in view of multiple, more immediate problems faced by many disabled persons, it is hardly surprising

that dentistry often rates a low priority. The disabled as a group tend to be socio-economically deprived, with a median income of only 60 per cent, and for the severely disabled, 40 per cent of that of the able-bodied. Compounding the problems are the high health related expenditures typically incurred by persons with disabilities.¹²

Unlike hospital and physician services, payment for dental treatment in the United States is made, for the most part, directly by the patient. In the previously cited survey of 73 patients treated in the DECOD program, 47 per cent paid from private funds or insurance; 42 per cent had been covered by government insurance. In the current era of budget cutting, the limited dental benefits available under government programs have been further reduced and the adverse effects on utilization of dental resources are already in evidence. For many disabled persons and their families, dental care is financially burdensome, if not beyond their reach. All too often, therefore, dental treatment becomes a function of the availability of funding, which in turn may be part of a larger political issue.

Unfortunately, even if all tangible barriers were to be removed, the disabled individual may still lack the necessary motivation to seek dental care. Not infrequently, developers of new dental programs are surprised and shocked that potential patients are hesitant to avail themselves of care offered even when it is made readily accessible to them. Thus, a recently opened University of Washington dental clinic, located in an apartment complex for low-income elderly, offered free dental screening examinations, yet found itself lacking for patients. A population of physically disabled persons living in another housing development has for the most part shown a similar disinterest in mobile dental services brought by DECOD to their residence.

Lack of dental awareness is not confined to the disabled individual and the immediate family, but is all too often shared by others, both professional and paraprofessional, involved in the patient's care. For example, the director of the long-term care facility may not be dentally oriented; usually assistance with personal hygiene is the duty of aides, who tend to be poorly educated, may suffer from dental neglect themselves, and are often reluctant to brush their charges' teeth.

While there are no magic solutions, a number of steps may be taken to facilitate access and promote consumer participation in those dental services which are available.

Increasing Access to Dental Care

Depending on the extent of their physical and/or mental impairment, many disabled persons will require

the support of others to assist them in accessing dental care.

There are numerous social service agencies, both local and national, some of which have a specific focus (Spina Bifida, United Cerebral Palsy, Multiple Sclerosis Society, Muscular Dystrophy Association, to name but a few); others are more generalized. For the developmentally disabled, a federally mandated Protection and Advocacy System (P. & A.) has been established in every state in the U.S. for the purpose of helping disabled persons obtain needed services. Each community develops its own information and referral system. The local office of United Way, Easter Seal Society, Association of Retarded Citizens or the Crisis Clinic might be productive sources of information.

Frequently patients will already be connected with an agency which serves as an advocate for their needs. If such is the case, it is advisable after obtaining the patient's consent, to establish contact with the agency, with regard to the patient's dental and over-all care plan. A social worker can be helpful in many facets relating to treatment. Typical tasks for the case worker might include making arrangements for transportation, determining the availability of financial aid for the patient's dental needs and counselling the patient to keep dental appointments.

The Auxiliary to the American Dental Association has recently been given the charge of identifying funding sources to finance dental care for indigent disabled persons. A number of State associations are also establishing access programs which are based largely on the willingness of the participating dentists to absorb part of the cost. Guidelines for developing Dental Care Access Programs have been established.¹⁴ The ultimate success of such programs remains to be proven. In DECOD it has been found that the development of individual payment plans is a useful method which enables some patients to receive treatment.

A referral method for bringing the disabled person seeking care in contact with available dental resources is also of great value. In the State of Washington, as has been done in a number of other geographic areas, a directory of dentists and dental clinics available to serve the patient with a disability has been compiled.^{2,3} The directory includes information on:

- number of new disabled patients that can be accepted per month
- age group preferred
- type of practice, general or specialty
- type of treatment that can be provided
- office accessibility to wheelchairs

- type of sedation used
- experience and willingness to treat specific disability types
- hospital affiliation
- availability of portable equipment and willingness to make house calls and nursing home visits
- acceptance of welfare patients

As more dental clinics and private dental offices are designed in accordance with accessibility specifications, it is expected that the current physical access problems will gradually diminish. Transportation also need not be an insurmountable barrier. Transportation resources providing free or low-cost services may already be available in the community or such services can be developed through advocacy efforts.

Apathy and dental ignorance are two aspects of the over-all issue of care delivery that can only be overcome through a concerted educational and public relations effort aimed at all those concerned with the disabled person's health.

The "campaign of concern" instituted by the National Foundation of Dentistry for the Handicapped illustrates the type of outreach into the community that is required.¹⁵ In the Washington program a variety of means are used to publicize the service and to expound on the importance of oral health. Pamphlets, posters, newsletters, news releases, public service announcements on radio and television, together with educational programs for patients and other health professionals have all been effective in raising dental awareness. As a result, over a period of time, patient interest and the co-operation of other health care providers with our program have increased notably.

Modalities of Care Delivery

Contrary to popular perception, dental treatment of disabled persons does not require elaborate special equipment. Generally the wheelchair-bound patient can be safely and readily transferred to the dental chair. Although some specific positioning devices have been developed,^{16,17} adaptive aids, if indicated, can generally be simple, e.g. pillows and safety straps.

While the majority of disabled persons can be treated in the regular dental office setting, for some it is more feasible to provide the dental service at the patient's residence, either private or institutional. For yet another group of patients it may be necessary to render treatment in a hospital or special care dental clinic. The advantages and disadvantages of each mode of care delivery must be carefully weighed and the particular requirements of each

population group taken into consideration. According to U.S. statistics, homebound persons constitute 3.2 per cent of the population at large¹² and 5 per cent of those over 65 years of age. Of these, only a relatively small number is considered bed-ridden.¹⁸ These are primarily persons with severe chronic medical conditions, e.g. advanced multiple sclerosis, arthritis, terminal cancer, and extensive pulmonary disease. They include the debilitated elderly. To meet the often-times urgent oral health needs of this type of patient, mobile dentistry brought to the home is a necessity.

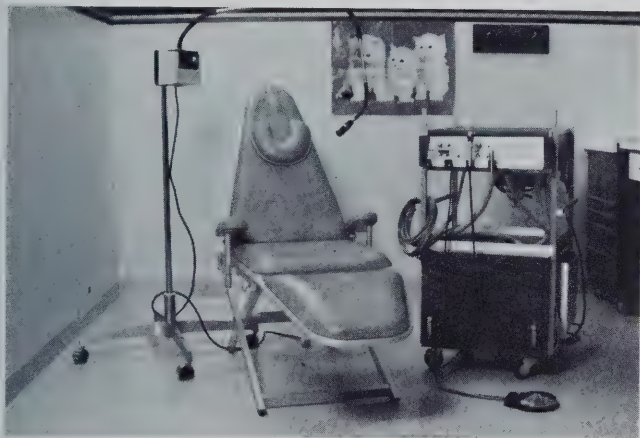
On the other hand, a substantial proportion of persons classified as "homebound" may in actuality be mobility-limited chiefly by reason of financial need and/or general inertia. In such cases a mobile dental service is still of value in that it allows the initial assessment to take place in the patient's home, thus providing the necessary stimulus to taking the first step in seeking care. If at the initial visit, the need for further treatment is determined, it is frequently possible to arrange for the patient to be brought in to the dental clinic or office for this purpose.

The effectiveness of mobile dentistry will depend in large measure on the equipment available to the practitioner and the ease with which it can be used. Mobile dental systems fall into three basic categories:

- large motor vehicles, outfitted as dental operatories into which the patient is brought for treatment
- portable units brought into the patient's home, if necessary, bedside
- a combination of the two types, for example, mobile units transported in a van equipped with dental laboratory facilities¹⁹

Fully equipped vans are primarily useful for care delivery to the more ambulatory patient and particularly at specific locations where services can be set up for an extended period of time, as in a rural centre. In contrast, such vans have not proven very functional in serving predominantly bedridden populations such as those in nursing homes.

It is our premise that individual portable units offer a more flexible system. Not only are they more utilitarian for the disabled populations to be served but acquisition and use of such units can be economically feasible for the average practitioner and thus will allow more dental professionals to include the homebound in their practices. As shown in **Fig. 2 and 3**, the armamentarium includes a dental unit on casters with built-in compressor and suction; a smaller unit which can be hand-carried, but which requires separate suction; a portable dental chair, a headrest which attaches to a wheelchair; a fiber-optic light



2. Mobile dental equipment: fiber-optic light, portable chair, mini-operatory.



3. Mobile dental equipment: (left and centre front) emergency units; (center back) portable dental unit; (right) suction unit.

source, a sonic scaler and several carrying cases, each designated for specific instruments and supplies according to procedure, i.e., hygiene, restorative, prosthodontic and emergency kits. We favor the use of small compressors, rather than gas tanks as the power source of choice. A light-weight portable dental X-ray machine is currently on order.

Our approach to mobile dentistry is shared by a number of clinicians with extensive experience in this area of care delivery; some have devised highly ingenious pieces of equipment. As the interest in homebound dentistry grows, so does the need for simpler, more compact modular types of units which can readily be transported in the average motor vehicle.

Dental programs, where available for patients in extended care facilities, vary widely in terms of the

physical plant utilized, staffing patterns and services provided. They range from permanent operatories to portable units, from salaried to volunteer staff and from regular care to emergency or consultation-only services. The American Dental Association recently compiled a comprehensive manual offering excellent guidelines to the establishment of dental patient care programs in residential facilities and other settings.²⁰

For most dental practitioners a modern, well-equipped operatory constitutes the ideal environment in which to practice. While in some institutions, the delivery of care by rotating teams of volunteer dentists and auxiliaries appears to be a satisfactory staffing arrangement, it has been our experience that the over-all quality and continuity of care tend to suffer in such a system, no matter how well-qualified and motivated the individual participant. A regularly scheduled and salaried dental staff appears to be preferable in ensuring on-going comprehensive care to populations served in an institutional setting.

In our experience, general anesthesia is required for only a small minority of patients. However, in these cases and for patients whose medical problems are of such severity as to place them at high risk, treatment in a hospital dental clinic or other appropriately equipped and staffed special care clinic is indicated.

Under less than optimum conditions alternative methods will need to be employed. For example, our dental team, on a regular weekly or biweekly basis, uses portable equipment to serve the patients on the Rehabilitation Medicine ward of one local hospital which has no permanent dental facilities and at a nursing home which has only a partially equipped dental operatory. The success of a dental program in these types of situations will depend largely on the extent to which care delivery is systematized and on the level of support given by the facility.

It is essential to establish priorities of care, not only in terms of the dental treatment plan but also in the context of the patient's over-all care plan. It is, therefore, equally important to designate a dentist who will, on an ongoing basis, assume responsibility for the treatment of given patients and a facility staff person who will act as co-ordinator with the dental program. The goodwill and co-operation of the facility co-ordinator, indeed, are crucial to the accomplishment of program goals. Thus, in each institution served by the DECOD program, we have now established the goal of a dental screening examination for all newly admitted patients; if further treatment is required and agreed to by the patient, or patient's

guardian, the dental appointment is given due priority in the patient's multiple therapies and activities.

In view of the disabled person's physical and/or mental limitations and the risk factors incurred in his/her dental treatment, legal considerations take on added significance. Where care is delivered to an institutionalized patient, formalized arrangements with the institution are recommended. These may range from affiliation agreements to the granting of hospital privileges on an individual basis. Responsibilities must be clearly delineated including such matters as documentation of treatment and collection of fees.

The development and utilization of appropriate forms can facilitate essential steps in treatment planning, for example, obtaining the initial health history, consent by the patient to the release of his/her medical records, and the request of such records from the physician.

It is becoming increasingly important in dental practice to document the patient's consent to treatment. The patient or the patient's legal guardian must be fully informed in language she/he can understand, of the treatment recommended, including costs; the alternatives to treatment, including non-treatment; and must, after exercising free choice, give written consent to the plan of care agreed upon. In the case of patients who are mentally deficient or confused but who are legally responsible for themselves, the determination of a patient's competence to make a decision on treatment may be left to the judgment of the dentist. Competency must be evaluated in terms of the nature of treatment and the associated risk factors. If the patient's competency is marginal and procedures such as oral surgery, entailing irreversible consequences, are contemplated, it would be prudent in addition to the patient's consent also to obtain written agreement from the patient's closest relative or advocate.

SUMMARY

The dental profession will be increasingly challenged to serve the growing segment of the population that is disabled. The ability to meet this challenge will depend on the close co-operation of the dental team, the disabled persons to be served, their families and the body of interdisciplinary care providers concerned with their well-being. Given availability of support services and the realization that awareness and consideration for the patient's condition outweigh the need for elaborate special equipment, the delivery of dental care for the majority of disabled persons can be successfully incorporated into routine dental practice.

REFERENCES

- 1 Special Report: Dental Care for Handicapped People. U.S. Dept. of Health and Human Services, Public Health Service. DHHS Publication N. (PHS) 81-50154, Oct. 1980.
- 2 Leviton, F.J. The Willingness of Dentists to Treat Handicapped Patients: a summary of eleven surveys. *J. Dent. Handicap.* 5:13-17, 1980.
- 3 Stiefel, D.J., Shaffer, S.M. and Bigelow, C. Dentists' availability to treat the disabled patient. *Special Care in Dentistry*, 1981, in press.
- 4 Casamassimo, P. Education of Professionals: Tipping the Balance of Involvement. *J. Dent. Handicap.* 3:4, 1978.
- 5 Roberts, R.E., McCrory, O.F., Glasser, J.H. and Askew, C., Jr.: dental care for handicapped children reexamined: dental training and treatment of the handicapped. *Journal of Public Health Dentistry*, 38:22-34, 1978.
- 6 U.S. Department of Health, Education and Welfare, Public Health Service. *Specialized Training for Dentists Treating Children with Handicaps; An Evaluation.* DHEW Publication No. 78-5218. Washington, D.C.: Government Printing Office, 1978, pp. 94-101, 113-115, 119-121.
- 7 Kinne, R.D., and Stiefel, D.J.: Assessment of student attitude and confidence in a program of dental education in care of the disabled. *Journal of Dental Education*, 43:271-275, 1979.
- 8 Final report of The Robert Wood Johnson Foundation/American Fund for Dental Health. National Conference on Dental Care for Handicapped Americans—Education Programs in Dentistry for the Handicapped. *J. Dental Education*, Part 2 of 2, September, 1979.
- 9 Watson, J.F., Brunda, G.C. and Grenfell, J. Attitudinal differences of faculty and students regarding the care of special (handicapped) patients in a dental school clinic. *JADA* 98:395-397, 1979.
- 10 Steinberg, A.D. The role of dental auxiliary personnel in dentistry for the handicapped. *Dental Assistant* 47:20-22, 1978.
- 11 Boyce, W. Dental management of the physically and mentally handicapped. *Canadian Dental Hygienist* 12:14-17, 1978.
- 12 Bureau of Economic and Behavioral Research, American Dental Association. *Profile of the Disabled Population in the United States*, Chicago, 1979.
- 13 Stiefel, D.J., Lubin, J.H., and Truelove, E.L. A survey of perceived oral health needs of homebound patients. *J. Public Health Dentistry* 39:7-15, 1979.
- 14 Manual on comprehensive dental care access programs—a guide for dental societies. Council on Dental Health and Health Planning, American Dental Association. Chicago, Illinois, 1981.
- 15 Statement of introduction. National Foundation of Dentistry for the Handicapped. Denver, CO, 1980.
- 16 Smith, H.P. and King, D.L. A postural support device for handicapped children. *J. Dent. Handicap.* 4:14-16, 1978.
- 17 Randell, S., Cohen, L. Dental service established with minimum effort. *Hospitals* 54:105-107, 1980.
- 18 U.S. Department of Health and Human Services, Office of Human Development Services, Administration on Aging. *Facts about Older Americans*, 1979. AHS Pub. No. (80-20006), Washington, D.C. 1979.
- 19 Summary of NFDH dental delivery system for homebound and nursing home population. National Foundation of Dentistry for the Handicapped, Denver, CO 1981.
- 20 Manual for dental patient care units. American Dental Association Council on Hospital and Institutional Dental Services. Chicago, IL, 1981.

Dental management of patients with mental retardation and related developmental disorders

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The problem of providing dental services to the handicapped is neatly summarized in a statement by Dr. Julius B. Richmond, the Assistant Secretary for Health and Surgeon General of the U.S. Department of Health and Human Services, in the preface to a Special Report issued in April, 1981, in conjunction with the International Year of Disabled Persons. In his preface to this report, Dr. Richmond says: "the dental needs of the average handicapped person are greater than those of the non-handicapped individual, and the obstacles encountered by disabled persons in obtaining dental services are substantial: . . . most handicapped persons can be treated in the average dental practice, but finding a dentist who is willing and confident enough to treat them, getting to that dentist's office. . . . and once there, overcoming architectural barriers that are likely to exist in the office, itself, may pose insurmountable difficulties, for those confined to wheelchairs. Moreover, the costs of treatment for

handicapped citizens often are great."¹ Who are these patients whom Dr. Richmond is describing, what are their special oral needs, why are they a challenge to the practicing dentist, and how can this challenge be met — these are the questions I shall attempt to answer in the course of this presentation.

About 30 years ago, parents were searching frantically for appropriate educational and vocational training settings for their children. Mothers would actually shop for a label which would enable them to enroll the child in the only facility in their neighborhood for miles around. There was even a caste system, based on socio-economic status, in which, for example, the term brain damaged was considered on a higher level than mentally retarded. But at the same time there was a growing awareness of the dangers of using diagnostic tags to obtain and deliver services.² This liability of labelling was the focus of a statement

by the renowned educational psychologist and Director of the League School for Seriously Disturbed Children, Dr. Carl Fenichel, "I must emphasize an essential truth that everyone working with these handicapped children should never forget: — that no matter what diagnostic label is pinned on a deviant, disordered child, that child is uniquely different from every other child in behavior, intellectual functioning, language deficits, and in his reactions to pain and fear."³

Despite this caveat the necessities of assessment, social planning, and funding, led, in 1970 to the term developmental disability, a legal definition set forth in the U.S. under the Developmental Disabilities Service and Facilities Construction Act (PL91-517). This definition clustered three categorical disorders: mental retardation, cerebral palsy, and epilepsy, under the rubric of developmental disability, and added any other "neurological condition of an individual found . . . to be closely related to mental retardation or to require treatment similar to that required for mentally retarded individuals, which disability originates before such individual attains age eighteen, which has continued or can be expected to continue indefinitely, and which constitutes a substantial handicap to such individuals."

In 1975 this definition was expanded to include autism and dyslexia, if the latter condition is attributable to mental retardation, epilepsy, cerebral palsy, autism, or a closely related condition.

In 1978 this was further amended in a non-categorical manner, in the Developmentally Disabled Assistance and Bill of Right Act (PL95-602), defining developmental disability functionally as severe, chronic disability attributed to a mental and/or physical impairment, which is manifested before the person reached age 22. It is likely to continue indefinitely and results in substantial functional limitations in three or more of the following areas of major life activity: self-care, learning, self-direction, economic sufficiency, receptive and expressive language, mobility, or capacity for independent living. Would that it including flossing and tooth brushing for hygiene!

Now we shall define each of the major disorders subsumed under the legislative umbrella of developmental disabilities:

Mental retardation refers to significantly subaverage intellectual functioning existing concurrently with deficits in adaptive behavior, and manifested during the developmental period. Let me emphasize that mental retardation is not a disease entity — it is a symptom of cerebral dysfunction and neurological impairment.

Cerebral palsy is a condition in which damage has

occurred to the central nervous system from birth or early infancy, which results in various degrees of dysfunction in speed, mobility, co-ordination, and may also involve sensory disorders and seizures.

Epilepsy refers to various disorders characterized by single or recurring loss of consciousness, convulsive movements, or disturbances of feeling or behavior.

Autism is a syndrome characterized mainly by extreme social withdrawal and delayed speech development.

Dyslexia is a partial inability to read or to understand what one reads silently or aloud.⁴

The mentally retarded are by far the largest of this group of related disorders, numbering 6.5 million, with approximately 4.5 million individuals with seizure disorders, of which epilepsy is estimated to affect 2,000,000 children and adults. The number of cerebral palsied is estimated as 7000,000; autism affecting 60,000 individuals.⁵ Estimates for dyslexia and similar learning disabilities range as high as 10 per cent of any given classroom in the schools of U.S. In all, it has been estimated that of the total population of the U.S. approximately 33,000,000 (15 per cent), are physically and/or mentally handicapped sufficiently to impair their ability to function normally in society.

Despite the differences in diagnoses there is a commonality of characteristics in these patients, in varying degree, which constitute a challenge to dental management:

- They are seldom isolated disorders, i.e., there is an overlapping of symptoms and deficits which must be recognized in assembling the data for evaluation and treatment planning. The dental evaluation must take into account motor and sensory deficits, emotional behavior, and intellectual level, as well as the dental status.⁶
- These are patients who are more vulnerable to stress in the environment.
- They have been described as language communication disorders, with diminished comprehension, and impaired speech functions. This, of course, is a major obstacle in establishing the rapport essential to dental management.
- Neuromuscular deficits result in limited ability to perform functions of self-care, including grooming, toothbrushing, etc.
- Prejudice and discrimination against the developmentally disabled is a fact of life, despite some improvement in public acceptance of the retarded and other handicapping conditions. Negative attitudes of dental professionals are reflected in a study

conducted by the National Foundation of Dentistry for the Handicapped (ADA News, February 23, 1981) which determined that only 20 to 25 per cent of all dentists in a community could be expected to treat handicapped individuals.

- Economically drained financial considerations constitute a major barrier to access to care.
- Although the vast majority of the developmentally disabled are amenable to routine dental care, a significant number have concomitant behavior disorders which offer a challenge to dental treatment.

De-institutionalization has resulted in the placement of many retarded individuals in a variety of community home settings. These clients are usually on a higher level of functioning and are more behaviorally acceptable than those remaining in the institution but may nevertheless have a history of potentially problematic behavior patterns.⁷ It may be anticipated that some of these patients, under the duress of a dental visit, will exhibit maladaptive behavior and constitute a challenge to management.

The effect of de-institutionalization in New York State has recently been studied by a dental team, along with the implications of oral health care of the discharged residents. As a result of the normalization process the number of residents in New York State facilities for the mentally retarded decreased from approximately 28,000 prior to the Willowbrook Consent Decree of 1974 to 13,000 at the present time, a 50 per cent decline in population. A dramatic demographic revelation in this study is the extended survival age of patients with developmental disabilities. Of the 13,000 institutionalized clients;

- 2,800 are under 21 years of age
- 5,500 are between 21-45 years of age
- 3,500 are between 45-65 years of age
- 1,200 are over 65 years of age

It is obvious that as a result of modern medicine and surgery we are now witnessing a graying of the developmentally disabled population, with increasingly complex problems of social and health planning.

The investigators studied the dental status of 100 residents who had been discharged and were now living in family care or in a congregate facility in the community (hostel, half-way house, etc.), and 200 institutionalized retardates in two state facilities. Surprisingly they found that in both groups approximately 80 per cent had visited a dentist within the course of the previous year, but they also noted glaring deficiencies in oral hygiene and a high incidence of edentulousness.

Much of the confusion in the dental management of the

patient with mental retardation or related developmental disorders lies in realistic treatment planning. The problem here is not the technical management — a filling is a filling, to paraphrase Gertrude Stein, but the decision making process. This is an entirely different mechanism for the special patient than for the relatively healthy patient either in the dental school clinic or the private office. It entails a data base of physical, ethical, moral, and economic factors consistent with the multiplicity of handicapping disorders and psychosocial problems presented by such individuals.

The history and examination must carefully elucidate the physical deficits and emotional factors which ultimately affect the management of the patient. A management strategy that fails to consider these factors, as well as the status of the dentition, will result in a poor prognosis for the results of treatment.⁸

There are many conflicting attitudes and controversies concerning the management and treatment of the retarded dental patient. Social and moral values may sometimes outweigh technical and therapeutic considerations in diagnosis and treatment design. The determination of benefit versus risk cannot be measured with a blueprint and constitutes a major dilemma in planning, whether for restorative dentistry or orthognathic surgery or any other elective surgery. The ultimate decision requires the merging of physical, emotional, and social components, as in the case of B.M. a 14-year-old black patient referred to the dental service for evaluation of gross dentofacial deformities:

This adolescent female had resided for most of her life in an institution for the retarded in New York State. In the course of wholesale deinstitutionalization of this facility she was relocated to a congregate home in the catchment area of our hospital, which now serves as a back-up resource for medical and dental care. Upon presentation in our handicapped patient clinic she was accompanied by a social worker and attendant, who were both well acquainted with this young lady. In the pre-examination interview they described the enormous strides which she had made in adjusting to her new surroundings, from a frightened, isolated, retreating child to a more sociable and indeed co-operative member of this communal home. Despite the outward appearance of feeble-mindedness and gross facial abnormalities there was something appealing about this young patient. She was non-verbal and of dubious comprehension, but she seemed to be listening intently through the interview. The social worker quickly explained the purpose of the visit. The staff felt that the potential of this resident for social acceptability

and adjustment to daily living was severely compromised by here grotesque facies, and that correction of the cranio-facial abnormalities would contribute to an improvement in her level of function. They were also concerned, of course, with the incessant drooling that was attributed to the apertognathia, and possible neurological deficits in deglutition and swallowing. Would we undertake to correct her deformities with orthognathic surgery, they asked.

This type of case is truly the diagnostic dilemma of the retarded, offering either dramatic cure or a Pandora's box of future troubles. The team responsible for a decision raised profound and numerous questions. Did her neurological deficits place her at high anesthesiological risk? What was the prognosis for orthognathic surgery? Would correction of the facial features result in a change in self-esteem of a severely retarded patient? Would it relieve the drooling? Would the patient tolerate the arduous discomfort of the post surgical period with intermaxillary fixation? Would she tear at the sutures out of frustration and anxiety? Would she be further emotionally traumatized by the hospitalization? Would the benefits outweigh the risks? And of course, the economic factors — would Medicaid pay for hospitalization, treatment, or not at all?

One can easily say that scientific objectivity should prevail over humane and social considerations, but it is impossible to divorce these factors from each other in arriving at therapeutic decisions. In this case the team concurred that orthognathic surgery be attempted, albeit with a dubious prognosis. The case was scheduled for the main operating room and the following procedures were performed:

- 1) Total maxillary osteotomy in segments to elevate the entire maxilla and retract the anterior segment
- 2) Anterior subapical mandibular osteotomy
- 3) Bilateral vertical osteotomies mandibular rami
- 4) Skeletal and intermaxillary fixation

Modalities of Management

The determination of the appropriate method of management of a developmentally disabled patient requires an individual assessment of physical, emotional, and economic factors as well as the status of the dentition. The vast majority of patients with mental deficiency and related disorders can be treated on an ambulatory basis using recognized principles of pedodontic management.⁹ Most dentists who have reservations about accepting such patients feel inadequately prepared and lack a patient, sympathetic approach. Although the Robert Wood Johnson Foundation made an enormous contribution by funding training programs in 11 undergraduate dental schools in the past few years, it nevertheless concluded that there is "a scarcity of faculty adequately prepared to teach dental students to care for the non-hospitalized handicapped."¹⁰

Ambulatory management proves successful in most cases when it combines basic pedodontic conditioning with behavior modification, the use of chemotherapeutic adjuncts, and sometimes relative analgesia. From every point of view — physiologic, psychologic, and economic — this should be the method of choice.

A second modality which has gained acceptance in the past decade is the use of intravenous sedation, usually in combination with inhalation analgesia/anesthesia. The criteria we employ in making this decision are as follows:

- The patient should be no higher than a Class III anesthesia risk, as defined by the American Society of Anesthesiologists
- The dental status should be limited to minimal caries and periodontal conditions — ideally treatable in a period of one to one and a half hours
- Parent or guardian supervision of pre-operative dietary management is realiable
- Medical evaluation must be obtained for this procedure
- Physical arrangements — operating room recovery room, etc. — are conducive to proper management

This method obviates expensive in-patient dental care which is often a traumatic emotional experience for the mentally retarded patient. The court of last resort for the unmanageable patient is comprehensive oral rehabilitation with the use of general anesthesia, usually via nasoendotracheal administration.

REFERENCES

- 1 Richmond, J.B.: Special Report: Dental Care for Handicapped People. U.S. Department of Health and Human Services. Public Health Service, DHHS Publ. No. 81-50154, April, 1981
- 2 Wiegink, R. and Pelosi, J.W.: Developmental Disabilities — The DD Movement. Paul H. Brookes Publishing Co., Baltimore, 1979, pp. 4
- 3 Fenichel, D.: Personal Communication, January 4, 1972
- 4 Healy, A.: Developmental Disability — A New Term for Old Conditions. *J Dent for Handicapped*, Vol. 3, No. 1, Summer, 1977, pp. 5-9
- 5 Ibid
- 6 Kamen, S.: Where Shall the Mentally Retarded be Treated? *Bulletin NYS Soc Dent Child*, Fall, 1963
- 7 Sutter, P., et al.: Comparison of Successful and Unsuccessful Community Placed Mentally Retarded Persons. *Amer. J. Ment. Defic.*, Vol. 85 No. 3 Nov. 1980 pp. 262-7
- 8 Kamen, S.: Mental Retardation Nowak, A. J. *Dentistry for the Handicapped Patient*. C. V. Mosby Co. St. Louis, 1976 pp. 53
- 9 Kamen, S.: Mental Retardation Nowak, A. J. *Dentistry for the Handicapped Patient*. C. V. Mosby, St. Louis, Mo. 1976 pp. 52
- 10 Final Report of the Robert Wood Johnson Foundation/American Fund for Dental Health Advisory Committee for the Program to Teach Dental Students to Care for the Handicapped. Nov. 1978. *J. Dent. Educ.* 43:29-35, Sept. 1979

Dental care of the medically compromised child: A behavioral overview

Dr. L.B. Smith

ABSTRACT

This paper deals with the behavioral aspects of providing dental care for the medically compromised child. By using excerpts from an interview that we conducted with a 14-year-old child who has a diagnosed astrocytoma and with his mother, we have discussed those areas which are often overlooked when dealing with the actual treatment of dental disease in this population group. Those areas discussed are:

- 1. What is the effect on the family's daily routine when a member has a debilitating chronic medical condition?**
- 2. What is the attitude of the profession towards the child who has a debilitating chronic medical condition?**
- 3. What is the attitude of the parents of these children towards dental care?**
- 4. What is the attitude of the patients towards dental care?**
- 5. What are the adjustments the private dental practitioner must make when treating a child with a debilitating chronic medical condition?**

We have attempted to outline these areas in order to sensitize the practising dentist to these areas of concern so that when he does treat the medically handicapped child the relationship will prove to be one of positive reward for all parties concerned.

INTRODUCTION

The title of this paper would seem to indicate the text would detail specific cause and effect relationships that are present in children who present themselves to the office of a private dental practitioner and have a history of some medical disorder which may complicate the delivery of dental care.

Upon reviewing the available literature,¹⁻¹⁶ it is apparent this subject has been thoroughly described. Little attention however has been given to other aspects of patient

care which we feel are very important when treating the special patient. These are:

- the effect on the family's daily routine when a member has a debilitating and chronic medical condition.
- the attitude of the profession toward the child who has a debilitating chronic medical condition
- the attitude of the parents of these children towards dental care.
- the attitude of the patient towards dental care.
- the adjustments the private dental practitioner must make when treating a child with a debilitating chronic medical condition.

To gain an insight into each of the five areas to be discussed, we conducted an interview with a family of a child who has a diagnosed astrocytoma. This child, who at the time of this interview was 14 years of age, had been ill for six years and had shown signs of continued physical deterioration. Excerpts from this interview will be presented throughout the balance of this paper to provide insight into each of the aforementioned areas of concern.

The Effect on the Family's Daily Routine

"How has the daily routine of your family life changed?"

"Well, it's very much busier, I think the biggest change is one of time and organization. The things that used to take a very short time now take a long time and have to be much more carefully planned"/

This statement, made by the mother of our patient, stimulated us to study what a 24-hour schedule in a child's life would entail. We wished to see how much time is spent in sleeping, in eating, in dressing, in school and recreation, in homework and extra curricular activities, in medical visits and in other activities that may be part of a normal routine. We evaluated the 24-hour schedule for a non-handicapped population, for a developmentally disabled population and for a medically handicapped population.

The **Figures 1 through 3** indicate that between these groups there are significant differences in time spent in the areas studied. Since the family, especially the mother, usually has to make a special effort and since this effort has a high cost both socially and economically to a family, we must appreciate that when a parent of a patient who has a chronic disability, makes an appointment in our dental office, it will take special effort on their part to attend these appointments. We must therefore be prepared to make special considerations for them in order to ensure that we do not discourage them from establishing a long term commitment to the dental health care needs of their child.

Upon evaluating the results of the study, it became apparent to us that when treating a handicapped child in the dental office, we must temper or modify our requests in order to enable the parent to realistically complete the task at hand. For example, the time that we book an appointment for this type of patient must take into consideration the problems that parent may have in getting the child to the office, or the problems the parent may have in accomplishing preventive tasks which may be assigned to them by the preventive therapist or hygienist in the dental office.

The following is an excerpt from the interview:

"... so it's probably not as convenient to just get up, and even if you can get an appointment, get there quickly and have the treatment, and perhaps preventive dentistry is more important in your child's case."

"That is what I have been persuaded of. Of course, there's a lot of problems to that as well because much of the preventative dentistry really happens at home, and it's a question of home care, cleaning and the right foods, and so forth, and even those things are more difficult to do when a person has to have them done for him".

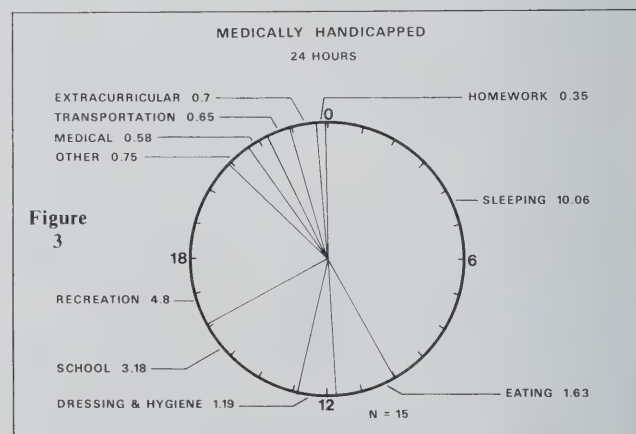
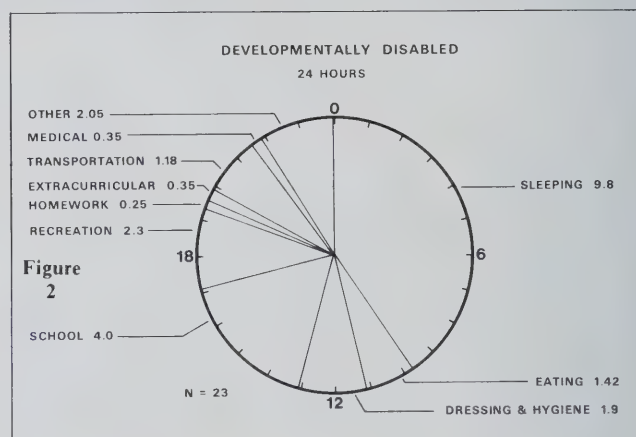
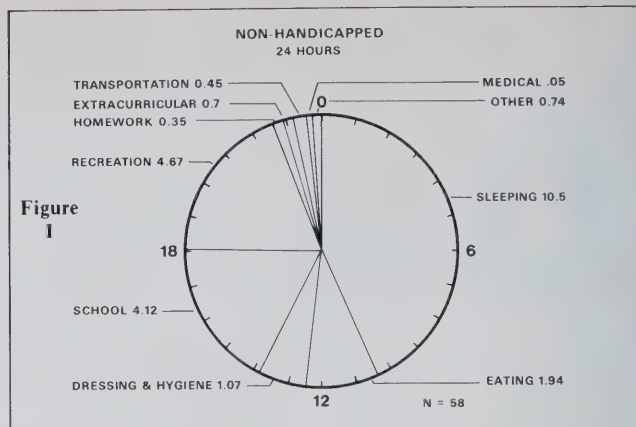
"Just simply cleaning teeth, being able to lean over a basin and clean and wash your teeth is also very much more difficult, is it not?"

"Yes, that's it".

We in the profession, must not take for granted what we consider to be a simple task. A task may in fact be a very difficult task for the parent and the patient to complete and if the demands that we make are too difficult, then the parent and the patient will be discouraged from maintaining good dental care.

The Attitude of the Profession

"In Parent's Associations, that is parents with disabled or ill children, the subject of dentistry has often come up. The parents have told me that the family dentist will suddenly look at their one child who has a particular problem and say, 'you know, I just can't deal with that. There isn't room in my surgery, or I'm sorry that's that'. So then of course, the mother has to look for someone else and she often doesn't know quite where to start. What do



you do? Do you phone up the nurse and say, 'can I make an appointment for my child, he's different, he's disabled, he will need this, he will need that.' It's a very difficult thing to do, it's a painful and tedious process."

This statement summarizes an attitude that has proven to be unfortunately prevalent in the profession and one that we must attempt to eliminate to ensure that the patients with special problems receive the due consideration and treatment required.

In order to examine the attitude of the dental profession towards the dental care of the handicapped child we conducted a telephone survey, the purpose of which was

to ascertain the profession's willingness to meet the dental needs of this special population group.

One hundred and two out of a possible two hundred and fifty dental offices in our community were randomly contacted by telephone. The caller, a dental assistant working in our office asked the receptionist in the office being phoned if a dental appointment could be made for a child who had either a medical, physical or developmental problem. The caller also indicated the child's sex, age and that the child had a specific dental problem that she felt required attention.

The results of this telephone survey were then pooled. Out of the one hundred and two dentists contacted, forty-three offices or 42% of that total refused to treat these children. This percentage is indeed very disappointing but reflects what we feel is the current attitude of the profession towards the handicapped. We then examined the reasons that were given when the caller asked the receptionist at the various offices why they would not treat these particular patients. Of the 42% of the dental offices who refused to treat handicapped children, the following categorized responses were collected:

- 1) 41.8 per cent felt that their staff was not properly trained and that their facilities were inadequate to accommodate this type of patient.
- 2) 20.9 per cent indicated that the child was too young to receive dental care.
- 3) 16.3 per cent referred the child to others in the community who were known to be willing and able to treat the handicapped child.
- 4) 9.4 per cent of those offices contacted indicated that the dentist was uncomfortable treating these patients and as such suggested that they receive treatment elsewhere but were not directly referred to anyone.
- 5) 11.6 per cent presented various other reasons for not treating this particular patient population.

It has been estimated that approximately 33 million citizens or 15 per cent of the 220 million population of the United States are physically or mentally handicapped.¹⁷ Since Canada has a population of approximately 22 million, we would expect to have an estimated handicapped population similar to that of the United States. This would be approximately 3,300,000 handicapped individuals in Canadian society. Applying the results of this survey on a national basis, one can see that a great deal must be done from within the profession to educate the practising dentist to the needs of this patient population. It is the profession's responsibility to ensure that through appropriate education members will not in future refuse to treat these patients because of poor training.

"Are they generally adequately prepared themselves for that very important attitudinal approach to a person who is disabled? Do they feel comfortable or do they betray their lack of comfort by being tense?"

"I would say that those who have had to practice in

working with disabled or severely ill children, yes; but others, no! They are quite often just like all other people. They are tense and they are embarrassed and they are not quite sure what to do so they back out. I think it's a question of exposure."

"But does this suggest perhaps that in their own professional preparation there hasn't been sufficient emphasis on the atypical patient that comes in. In other words, would it not be a good idea for schools of dentistry or medicine to make sure that their professionals that are going into the field are at least aware of the wide range of human beings with which they come into contact?"

"I think that management is a very important part of treatment and should be emphasized. It goes on much longer."

We cannot realistically expect every dentist to want or be able to treat the medically compromised child. We feel however that it is the responsibility of each and every practising dentist to ensure that when they are asked to treat this patient, if they choose not to treat them, that they be able to refer the patient to others in the community who are willing to treat these children.

To ensure that the parents of these children are able to reach a dentist who will treat them, referral lists should be compiled by either the local dental association or the provincial dental association and these lists should be kept in a central location where either the parent or the dentist can phone and be referred to someone who treats the handicapped. It is in this manner that the profession would ensure the dental needs of this medically compromised handicapped population, can and will be met.

The Attitudes of the Parents Toward Dental Care

Our experience in treating the medically compromised child has raised the following question in our minds; Where, in the mind of the parent, does dental care fit into the total health care needs of their child? "How important is it for you that your son receive adequate dental treatment?"

"You are right, it's the first thing, do I really have to do it. I think that that's the first thing that I really think about. Is it a vital enough part of his health to use up not only his time but his courage and well, to use him up."

"The human resource?"

"Yes, that's right." So I have to be fairly well persuaded, I think if not by the dentist, by the media or by what I read, that is of course, unless we have a chronic toothache or something like that, but in a straight preventive care, the first thing I ask, IS THIS REALLY WORTH IT?" And sometimes I cancel appointments because it isn't worth it at that particular time."

We have a very difficult task in establishing a good level of rapport with the parents of the handicapped child. We must, with the aid of our medical confreres educate parents to the importance of dental care as being an in-

tegral part of total health care.

Establishing rapport with the parents of the medically compromised child is not a particularly easy task but the dentist and his entire staff must be empathetic and accommodating to this population group.

"In the case of a child who has had a lot of different procedures, there is a very definite aspect in confidence, that is, with my other non-disabled children; most of their medical visits resulted in a ring, or a candy, or a pat on the back and come back next week. But in the case of this one child, most medical visits resulted in bad news, or an uncomfortable procedure, or a hospital stay. We are all apprehensive and we all have to be able to build confidence in each other."

Success on the part of the dental team providing care for a child with a medical handicap depends entirely upon the ability of the dentist and his staff to build confidence both with the mother and with the child.

Attitude of the Patient Toward Dental Care

To successfully treat the medically compromised child, from both a physical and an emotional point of view, the dentist and his staff must establish confidence with the child and his parents. These children, for the most part, have been exposed to many unpleasant experiences throughout their young lives and tend not to have a very high opinion of those in the professions who are treating them. We must be willing and able to spend the time required to establish a trust between the child and ourselves if we are to carry out a long term dental care plan for that child.

The following question was asked of our 14 year old patient during the interview: "What about the office visits themselves?" How do they affect you, in terms of anticipation and expectation?"

"Well, I'm hysterical about medical things, I don't think I really notice the problems of getting in the office and things like that . . . I'm not calm going to a dentist or a doctor. I don't think anyone is calm going to a doctor or a dentist, as you said. I think kids are usually pretty scared of going to the dentist. But I think I am a bit more hysterical than the average and I do say that's due to my experiences."

"Well, you've obviously thought about how it affects you, but how do you cope with your panic, or your hysteria or fear?"

"Scream, yell, no, I get depressed, very nervous, don't sleep well, things like that and I rely a lot on my family to help me through exactly what I am going through."

We in the profession who treat the medically compromised child must learn to appreciate the reality of the child's fear with respect to dental care. It is mandatory that we take an appropriate amount of time with a patient, establishing rapport with him, establishing trust with him, being honest with him. Without spending this time the experiences for both the dentist and the patient will likely

be quite negative and with future treatment will be very stressful for both parties.

The Adjustments Made by the Dentist Within the Private Practice

Once the practising dentist has made a commitment that he will in fact treat the patient with a medical handicap, he must set up his practice to meet the various needs of these patients. It is very important to realize that very little change, if any, has to be made to the usual office routine. The dentist who has made the commitment to treat the medically compromised child must have a working knowledge of the handicapping condition as it relates to the patient's general oral health. He must have an understanding of the implications of the handicapping condition on the life style and life span of the child and he must be able to evaluate and access the maxillary facial and dental components in order to institute the appropriate preventive and rehabilitative care for the child.

On the initial visit when the parent brings the patient to the dental office, probably the foremost method we have in preventing medical complications during the provision of dental care is to have an adequate medical history given by the parent. This most important preliminary procedure cannot be overemphasized as it provides us with a means of gaining the necessary insight to the child's past experiences which enables us to then make a decision as to the best approach that should be taken in order to establish the confidence and trust relationship with the child and with his parents.

It has been our experience that often parents fail to recognize the relationship between the overall medical status of their child and the oral status of their child. Unless the history is accurate and detailed enough, there is a greater potential for unnecessary complications occurring once treatment has begun.

After the parent has completed the medical history it is incumbent that the dentist review the completed history and question the parent directly with respect to any areas on the history which have either been incompletely filled out or those areas which have indicated a positive history. It is important that the questions being asked are in as simple a form as possible to ensure a better understanding by the parent who is filling out the medical history form. Figure 4 is an example of the medical history we use in our office.

If a child is currently under treatment for a recent acute or chronic illness, it is incumbent upon the dental practitioner to contact the patient's physician and to receive from the physician a written outline describing the patient's medical problem. In this manner the parent will gain an appreciation and understanding of the relationship between the medical treatments and dental treatments as well as gain a respect and confidence in the dentist by seeing that he understands the importance of the medical complicating factors and is willing to take time to ensure that the child receives the best care possible.

Figure 4

MEDICAL HISTORY

Did you have any problems while you were pregnant with this child? _____

Did he/she have any problems during the first year of life? _____

Is this child adopted? _____

Has your child had any of the following:

	Yes	No		Yes	No
Measles (rubeola)	_____	_____	Cold Sores (Herpes simplex)	_____	_____
German Measles (rubella)	_____	_____	Canker sores	_____	_____
Chicken Pox (varicella)	_____	_____	Mumps	_____	_____
Hepatitis (infectious)	_____	_____	Infectious Mononucleosis	_____	_____
(serum)	_____	_____	Monilial infection (thrush)	_____	_____

Has your child ever been hospitalized? _____

If yes, where _____ When _____

For What? _____

Is your child presently on any medication? _____

If yes, describe _____

Has your child had any history of:

	Yes	No		Yes	No
ALLERGIES			BLEEDING DISORDER	_____	_____
Food	_____	_____	RESPIRATORY DISORDER		
Pollen	_____	_____	Asthma	_____	_____
Drug	_____	_____	Cystic Fibrosis	_____	_____
HEART DISEASE			Other	_____	_____
Rheumatic	_____	_____	GASTRO-INTESTINAL DISORDER		
Congenital	_____	_____	Diabetes Mellitus	_____	_____
Other	_____	_____	Diabetes Insipidus	_____	_____
GENITOURINARY DISORDER			Liver: Jaundice	_____	_____
Bladder	_____	_____	Hepatitis	_____	_____
Kidney	_____	_____	Other	_____	_____
Other	_____	_____	ANY HISTORY OF SEIZURE	_____	_____
IMMUNOLOGICAL DISORDER	_____	_____	PHYSICAL DISORDER	_____	_____
LEARNING DISORDER	_____	_____	EMOTIONAL DISORDER	_____	_____

Has your child had any unfavorable reactions to drugs? _____

IF YES TO ANY OF THE ABOVE, PLEASE DESCRIBE: _____

If you have previously completed this form for another child, please give that child's name: _____

Because your child is a minor, it becomes necessary that a signed permission to be obtained from a parent or guardian before any and/or all necessary dental service can be started. Authorization is hereby granted as such. Furthermore, you will be responsible for any account incurred on this child for dental treatment and understand that the account is due at each appointment.

Date _____ Signed _____
PARENT OR GUARDIAN

If any questions answered above were "yes" and require further explanation, please describe: _____

We would like to thank you for spending the time in filling out this form.

Drs. Baylin, Narvey, and Smith

Once the radiographic and visual dental examination have been completed and a treatment plan has been formulated, the dentist and his auxiliaries must then carefully present this plan to the parent and the child. Taking the time now further establishes a greater confidence between all the parties involved and will enable a reduced anxiety when the actual treatment is performed.

Paraphrasing from the interview, the child who we interviewed was asked the following question:

"What about professionals, people who one would expect to have a better attitude and be better prepared for meeting a whole variety of different people. I am talking about nurses, doctors, dentists... all the health care people".

"You mean their reaction to me? Well, I think it depends. If you go to a doctor, dentist or a nurse who is used to working with children, they do very well for me because I am a child and they know how I would like them to react from experience. You go to a doctor, nurse, dentist who is used to working with adults and it's not quite as comfortable, at least for me, because they're not quite sure how to react, like how to act — whether they should treat me like a full-grown adult, or a very young child or in the middle somewhere; It's hard to determine where the middle is and they're not quite as comfortable. Doctors, nurses, dentists, they're never quite sure if they should tell you everything. You know, they don't want to have a child having a nervous breakdown or something because of it, and they're not sure how much he can take, so — often the physician will speak to my parents and I have to later find out what they said, and that works out fine for me because my parents are willing to tell me what has been discussed. If the parents weren't willing, then you don't find out as much and I think the kids as people should know exactly what's going on".

In establishing the trust and confidence required in order to carry out dental care for the medically compromised child, it is paramount that the entire dental team be totally honest with the patient and with the parent. Management of these children depends entirely upon communication and if communication is complete in all facets, then dental care will be a most pleasant experience for all parties involved.

"I'd like to ask you just one question and that is, if you could give a bit of free advice to the young intern, whether it be a doctor or a dentist, who's coming into the professional world, and you had the opportunity to say, "Listen to my point of view," what would be the sorts of bits of advice that you would give him, when they encounter someone who has a disability?"

"I'd say, give the person time. Listen to what they're saying. Make sure that they're comfortable before you start any treatment or procedure and just give them enough time so that they can feel comfortable.

SUMMARY:

Providing the dental care for the medically comprised patient can prove to be a most rewarding experience for the dentist and his auxiliaries. This treatment can, for the most part, be accomplished in the confines of the private dental practice and can for the most part be accomplished by the general family dentist. Certain circumstances dictate that treatment would be required outside the dental office in a hospital setting and would likely have to be provided by those with speciality training.

To ensure a favourable atmosphere in which to work from both the patient's and dentist's points of view, it is incumbent upon the dentist and his team to glean an understanding of the problems and attitudes that are experienced by the patient and his family. The dentist treating this type of patient must be very comfortable in the knowledge that he has with respect to the inter-relationships between the medical problems and the dental care required. It is not an easy task and one that requires an expansion of ones working knowledge with these various conditions but can prove to be a very rewarding task for all concerned.

REFERENCES

- 1 Weyman, J., *The Dental Care of Handicapped Children.*, Churchill Livingstone., Edinburgh and London, 1971.
- 2 Musselman, R.J., et al: *The Dentists Manual of Medical Handicaps*, Louisiana State University, School of Dentistry.
- 3 Fass, B., Lippe, B.M., *Common Pediatric Medical Disorders Complicating Surgery*, in Saunders, B: *Pediatric Oral and Maxillo-facial Surgery*, C.V. Mosby Company, St. Louis, 1979 p.593-589
- 4 Nowak, A.J., Ed. *Dentistry for the Handicapped Patient*, C.V. Mosby Company, St. Louis, 1976.
- 5 Cleaton-Jones, P., *Essential Medicine for Dental Practice*, Charles C. Thomas, Springfield, Illinois, 1971.
- 6 Canon, S., *Dental Care of the Handicapped Child* in Forrester, D.J. et al in *Pediatric Dental Medicine*. p. 597-616.
- 7 Riviere, G.R., *Oral Manifestations of Immunological Disorders and Transplantation Genetics*, p. 313-337 in Stewart R.E., Prescott, G.H., *Oral Facial Genetics*. C.V. Mosby Company, St. Louis, 1976.
- 8 Gorlin, R.J. *Heritable Mucocutaneous Disorders*. p. 338-384 in Stewart, R.E., Prescott, G.H., *Oral Facial Genetics*. C.V. Mosby Company, St. Louis, 1976.
- 9 Prescott, G.H., *Oral Facial Manifestation of Inborn Errors of Metabolism*, p. 385-406, Stewart R.E., Prescott, G.H., *Oral Facial Genetics*. C.V. Mosby Company, St. Louis, 1976.
- 10 Jorgenson, R.J., *Oral Manifestation of Heritable Blood Disorders*, p. 407-447, in Stewart, R.E., Prescott, G.H., *Oral Facial Genetics*, C.V. Mosby Company, St. Louis, 1976.
- 11 Weinberger, M., Hendiles, L., *Management of Asthma*. 1. Approach. Postgraduate Medicine. Vol 61. No. 5, 85-90, May 1977.
- 12 Weinberger, M., Hendiles, L., *Management of Asthma*. 2. Anti-asthmatic Drugs. Postgraduate Medicine, Vol. 61, No. 5, 95-103, May 1977.
- 13 Sanger, R.G., *Hepatitis: A New Crisis in Pedodontics*, Pediatric Dentistry, Vol. 3, No. 1: 46-52, 1981.
- 14 Shields, W.B., *Dentistry and the Issue of Hepatitis B*. JADA 102: 180-182, Feb. 1981.
- 15 Alexander, R.E., *Hepatitis Risk: A Clinical Perspective*. JADA 102: 182-185, Feb. 1981.
- 16 Rothstein, S.S., Goldman, H.S., Acromano, A.S., *Hepatitis B. Virus: An Overview for Dentists*, JADA, 102: 173-176 Feb. 1981.
- 17 Johnson, R.W. Foundation: Special Report-Dental Care for Handicapped Americans, Number 2, 1979.



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Announcements

CANADA

CDA/ODA 1982 National Convention, The Sheraton Centre, Toronto, Ontario, May 9-12, 1982. Contact: Mrs. W.C. Durham, Convention Manager, Ontario Dental Association, 234 St. George Street, Toronto, Ont. M5R 2P2.

October/octobre

Canadian Academy of Endodontics, 1981 Annual Meeting, Vancouver, British Columbia, October 16-18, 1981. Contact: Dr. Barry Chapnick, 235 St. Clair Ave. W., #103, Toronto, Ont. M4V 1R4. Phone: (416) 922-5115.

American Academy of Periodontology 67th Annual Meeting, Sheraton Centre, Toronto, Ontario, October 21-24, 1981. Contact: Office of the Secretary, American Academy of Periodontology, 211 E. Chicago Ave., Chicago, Ill. 60611, U.S.A.

The Canadian Society of Oral & Maxillo-facial Surgeons 28th Annual Convention, Chateau Laurier Hotel, Ottawa, Ontario, October 22-25, 1981. Contact: Dr. Samuel P. Kucey, 239 Argyle, Ottawa, Ont. K2P 1B8, Tel: (613) 232-4203.

November/novembre

Toronto Academy of Dentistry Annual Winter Clinic, Royal York Hotel, Toronto, Ontario, November 26, 1981. Contact: Academy of Dentistry, 234 St. George Street, Toronto, Ont. M5R 2P2.

December/Décembre

The Royal College of Dentists of Canada, Part II Examinations, University of Toronto, Faculty of Dentistry, December 4-5, 1981. Contact: Dr. John E. Speck, Registrar, Royal College of Dentists of Canada, 170 St. George Street, Suite 614, Toronto, Ont. M5R 2M8.

International November/novembre

New York College of Dentistry's new one month course "Current Concepts In American Dentistry", New York University Dental Centre, 421 First Avenue, New York, New York 10010.

lasian College of Dental Surgeons, Sydney, Australia, November 9-12, 1981. Contact: Hon. Secretary, Royal Australasian College of Dental Surgeons, Inc., 229 Macquarie Street, Sydney, NSW 2000, Australia.

Swedental Dental Congress and Trade Fair, Stockholm, Sweden, November 18-21, 1981. Contact: A.C. Nackstad, Svenska Tandlakare-Sallaskapet, Nybrogatan 53, 11440 Stockholm, Sweden.

The XVI International Congress of the Mexican Dental Association, city of Mexico, November 19-22, 1981. Contact: Dr. Luis Quiroz, Secretary General, XVI International Congress of the ADM, Cerrada de Popocatepetl 51-A, Mexico 13, D.F., Mexico.

1982 -

Hawaii Dental Association 79th Annual Scientific Session, Sheraton-Waikiki Hotel, Honolulu, Hawaii, January 24-29, 1982. Contact: Hawaii Dental Association, Exhibits Committee, 1000 Bishop St., Suite 805, Honolulu, Hawaii 96813.

The East Coast District Society Annual Winter Meeting, Fontainebleau Hilton Hotel, Miami Beach, Florida, January 28-30, 1982. Contact: East Coast District Dental Society, 420 South Dixie Highway, Suite 2-E, Coral Gables, FL 33146, U.S.A.

The Jamaica Dental Association 18th National Convention, Mallards Beach Hyatt Hotel, Ocho Rios, Jamaica, February 14-18, 1982. Contact: Dr. G.C. McDowell, Chairman, Convention Committee, Jamaica Dental Association, P.O. Box 215, Kingston 5, Jamaica, W.I.

1982 World's Fair, Knoxville, Tennessee, May 1 — October 31, 1982. Contact: Anne Russell, Director of Special Affairs, City of Knoxville, P.O. Box 1631, Knoxville, Tennessee 37901, U.S.A. Phone: (615) 521-2549.

Australian Dental Association, 23rd Dental Congress, Perth, Australia, May 2-7, 1982. Contact: Australian Dental Association, 23rd Dental Congress, P.O. Box 29, Parkville, Victoria, Australia, 3052.

College of Dental Surgeons of British Columbia Convention, Hotel Vancouver, Vancouver, B.C., May 4-7, 1982. Contact: Venue West Executive Services Ltd., 1704 1200 Alberni Street, Vancouver, B.C. V6E 1A6.

The Dental Association of South Africa, Diamond Jubilee Congress, Durban, South Africa, May 10-14, 1982. Contact:

Dr. Helmut Heydt, Executive Secretary, Dental Association of South Africa, Private Bay One, Houghton, 2041, South Africa.

The International Congress of Oral Implantologists World Congress VI for Oral Implantology, Hyatt Regency Hotel, Maui, Hawaii, May 21-23, 1982. Contact: Mr. Clifford J. Kirschner, Executive Director, The International Congress of Oral Implantologists, P.O. Box 2277, Grand Central Station, New York, N.Y. 10163, U.S.A.

Journées Dentaires du Québec, Queen Elizabeth Hotel, Montreal, Quebec, May 23-27, 1982. Contact: Dr. Morton R. Lang, Journées Dentaires du Québec, 801 Sherbrooke Street East, Suite 303, Montreal, Que. H2L 1K7. Tel. (514) 481-0397.

XIIth Biennial Conference on Education and Research is scheduled to take place in Halifax, Nova Scotia, June, 1982.

73rd Annual Conference of the Canadian Public Health Association, Explorer Hotel, Yellowknife, Northwest Territories, June 21-24, 1982. Deadline for submitting abstracts is December 31, 1981. For further details contact: Dr. David Martin, Chairman, Scientific Program Committee, c/o Canadian Public Health Association, 1335 Carling Ave., Suite 210, Ottawa, Ont. K1Z 8N8. Phone: (613) 725-3769.

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ALBERTA — Calgary. Associate required for busy dental office. Contact: Dr. J.T. Boulton, 7 Parkdale Crescent N.W., Calgary, Alta. T2N 3T8. Phone: (403) 284-5596.

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ONTARIO — London. Associate required to operate dental practice during the months of December, January and February. For further information please phone: (519) 672-8770 (office) or 439-2715 (home).

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*Yankell, S.L., U Pa Sch Dent Med, Phila, Penn IADR Journal of Dental Research, Jan 79, Vol. 58, P. 239, Abstr 585
Nygaard-Østby, P., et al, Jordan as Oslo, Norway; U Pa Sch Dent Med, Phila, Penn.
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1. Zacherl, W. A., "Clinical Evaluation of a Sodium Fluoride-Silica Abrasive Dentifrice," *Journal of Dental Research*, Vol. 60, Special Issue A, page 577, March, 1981.

2. Beiswanger, B. B., Gish, C. W. and Mallett, M. E., "Effect of a Sodium Fluoride-Silica Abrasive Dentifrice Upon Caries," *Journal of Dental Research*, Vol. 60, Special Issue A, page 577, March, 1981.

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Editorial

683 President to President

Dr. Gilbert Utas passed on the chain of office to Dr. Donald Williams of Moncton, New Brunswick at the annual meeting in Calgary. Their comments on that occasion are summarized.

Letters

- 689 - 691** Several dentists take exception to Dr. Howie Rocket's philosophies and also the publicity about his retail dentistry operation.

In the News

- 692 FDI Award**
Brig.-Gen. W.R. Thompson has received a Merit Award from FDI.

- 696 Awards**
Two former presidents of the CDA have been awarded honorary membership in the CDA, and an Alberta dentist has received the distinguished service award. On Page 697 there is a report on another distinguished service award winner.

- 698 Commissions tax**
A Toronto lawyer cautions the profession about the problems with withholding tax on commissions, and Revenue Canada's rules are outlined.

- 700 FDI**
Dr. George Beagrie tells Canada's dentists why they should be more actively supporting the Fédération dentaire internationale.

- 702 Legal pitfalls**
The purchasing of electrical equipment can sometimes lead professionals into potential trouble. Material supplied by the Canadian Standards Association defines the problems.

- 721 Board of Governors**
A full report of the Board of Governors is given and biographies of the new president and president-elect are included.

- 725 Future watch**
Ruben Nelson, one of the speakers at the Calgary Convention said he is a joyful pessimist about the future, and examined some of the problems and solutions he foresees.

Convention

The 1981 Annual Convention was held in Calgary, and news of the Board of Governors' meeting and convention activities is contained throughout this issue.

Publications

- 726 Interpreting dental radiographs**
The book does not go into great depth, but is useful as a capsule of radiologic interpretation, the reviewer says.

- 726 A Manual of Four-Handed Dentistry**
"An excellent book for the concerned practitioner."

- 727 Essentials of Periodontics**
A good introductory book for students, and an easily read review for the dental practitioner.

Scientific

- 729 Simplified bleaching of discolored pulpless teeth —**
Lemieux and Todd.

- 732 Root fracture management with calcium hydroxide therapy —** Dow.

- 738 Announcements**

- 734 Marketplace**

- 738 Advertisers' Index**

- 701 RRSP**

Board of
Governors

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Journal

de l'Association
Dentaire
Canadiennenovembre
1981

Editorial

- 684 D'un président à l'autre**
Le Dr Gilbert Utas a remis la chaîne présidentielle au Dr Donald Williams, de Moncton (Nouveau-Brunswick), lors de l'assemblée annuelle de Calgary. Voici un aperçu des propos qu'ils ont tenus à cette occasion.

Lettres

- 689 — 691** Plusieurs dentistes ne partagent pas les vues du Dr Howie Rocket, pas plus qu'ils ne prisent la publicité sur ses activités de commercialisation de la médecine dentaire.

- 691** Un dentiste Québécois remercie le Journal de L'ADC de diffuser l'information sur les "nouvelles dimensions" de la profession.

Actualités

- 712 Distinction de la FDI**
La Fédération dentaire internationale a décerné une distinction au mérite au brigadier-général W.R. Thompson.

- 715 Distinctions**
Deux anciens présidents de l'ADC ont été faits membres honoraires de l'association et un dentiste de l'Alberta a reçu une plaque pour service éminents. A la page 000, un article parle d'un autre récipiendaire de la distinction pour services éminents et du gagnant du prix du FCRD.

- 709 L'impôt sur les commissions**
Un avocat de Toronto prévient la profession des problèmes concernant la retenue d'impôt sur les commissions et donne un aperçu des règlements de Revenu Canada.

- 710 La FDI**
Le Dr George Beagrie explique aux dentistes canadiens pourquoi ils devraient appuyer davantage la Fédération dentaire internationale.

- 706 Les plèges de la procédure**
L'achat de l'équipement électrique peut parfois attirer des ennuis aux professionnels. L'information fournie par l'Association canadienne de normalisation permet de cerner le problème.

- 713 Le Bureau des gouverneurs**
Voici un rapport complet de la dernière réunion du Bureau des gouverneurs, y compris la biographie du nouveau président et celle du président élu.

- 717 Coup d'oeil sur l'avenir**
Le futurologue Ruben Nelson, un des conférenciers au congrès de Calgary, jette un regard "joyeusement pessimiste" sur l'avenir. Voici un aperçu des problèmes qu'il entrevoit et des solutions qu'il propose.

- 738 Avis**

- 734 Petite annonces**

- 738 Index aux annonceurs**

- 691 RRSP**

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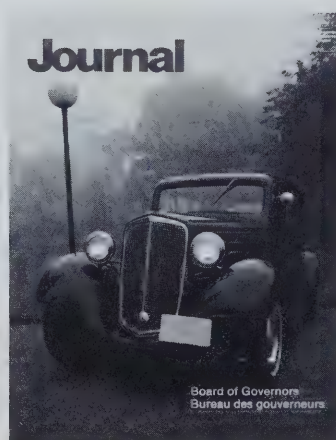
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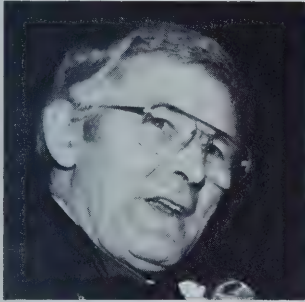
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Dr. Gilbert Utas

FROM ONE PRESIDENT TO ANOTHER



Dr. Donald Williams

When I was installed as President, I offered a sincere and honest effort and asked that each and every member of the association do likewise. I am very pleased to report that as I visited across the country and contacted members on a great variety of issues, that is exactly what I encountered."

With those words, Dr. Gilbert Utas turned over the reins of the presidential office to Dr. Donald Williams at the annual meeting in Calgary.

He said a major example of the association's cohesiveness was demonstrated in the provinces' response to an invitation for a meeting with the Medical Services Branch of the department of National Health and Welfare to discuss the dental therapist issue.

"This display of sincerity impressed the federal government as an honest effort and has richly enhanced the position of CDA with that department," he said.

While the issue of duty on dental materials has not been fully resolved, Dr. Utas stated a complete review of duties has been started and CDA presented a brief to the Senate Committee on Banking, Trade and Commerce.

The March conference on priorities produced input from the dental profession across the country on the aims and objectives of the association.

The support and co-operation of corporate members and affiliated groups was proven during meetings with them, he said.

"Meetings with representatives of allied health organizations and international dental associations gave credence to the existence of the CDA as a highly respected national organization," Dr. Utas commented.

He said manpower is a rapidly increasing concern and a

two-year study now under way will help resolve the problem.

"Many challenges have been presented... some have been met... others are yet to be resolved, and I am certain yet others will present themselves in the months ahead."

In turning over the chain of office to Dr. Williams of Moncton, New Brunswick, Dr. Utas said the association would be served by a dedicated and conscientious gentleman.

Dr. Williams said "I accept the challenge of the presidency knowing that the management concept of governing is in place and provides a collective leadership which serves the association well.

He said fiscal responsibility will continue to be of prime importance and that future planning will be based on the results of the priorities meeting.

Dr. Williams also said good government relations are essential.

"This era of consumer issues and government regulation reinforces more forcefully than ever that a high profile for the CDA on Parliament Hill is not only necessary, it is mandatory."

He said he expects to develop the CDA's profile in Ottawa to such a degree that whenever dentistry is discussed, the association will be consulted.

Dr. Williams said while he will continue to listen, he will also speak out in his role as president of the association.

"Remember, in order to co-operate effectively and to reach a consensus, we must communicate..... Every member's attitude is important to the future of our association," Dr. Williams said.

"Let us go forward in the 80s celebrating the 80th birthday of CDA with a strong, vibrant association."

D'UN PRÉSIDENT À L'AUTRE



Drs Gilbert Utas et Donald Williams

Quand vous m'avez installé à la présidence, je me suis engagé à faire un effort sincère et honnête, et j'ai demandé à tous les membres de l'association d'en faire autant. Il me fait grand plaisir de vous faire rapport que c'est exactement ce qui s'est produit si j'en juge par mes voyages dans le pays et mes entretiens avec les membres sur une foule de sujets."

Tels furent les propos du Dr Gilbert Utas au moment où il cédait le fauteuil présidentiel au Dr Donald Williams, lors du congrès annuel tenu à Calgary.

À son avis, la participation des provinces à une rencontre avec la Direction générale des services médicaux du ministère fédéral de la Santé et du Bien-être, pour discuter de la question des thérapeutes dentaires, a montré on ne peut mieux la cohésion de l'association.

"Cette manifestation de sincérité et d'honnêteté dans l'effort a impressionné le gouvernement fédéral et renforcé considérablement l'Association dans ses rapports avec le ministère", dit-il.

Le Dr Utas souligne que la question des droits de douane sur les matériaux dentaires fait actuellement l'objet d'un examen complet et que l'association a présenté un mémoire sur le sujet au comité sénatorial de la banque et du commerce.

La conférence du mois de mars sur les questions prioritaires a fait participer la profession dentaire de tout le pays à l'établissement des buts et objectifs de l'association.

L'attitude des membres corporatifs et des groupes affiliés aux réunions a témoigné de leur appui et de leur collaboration, dit-il.

"Nos rencontres avec les représentants des autres organismes de la santé et des associations dentaires internationales ont confirmé le respect dont jouit l'association, à titre d'organisme national", de dire le Dr Utas.

Quant au problème de la main-d'oeuvre, qui prend de plus en plus d'importance, le président sortant a souligné

qu'une étude de deux ans, déjà amorcée, aidera à le résoudre.

"Plusieurs défis ont été posés... certains ont été relevés... d'autres pas encore, et je suis certain qu'il y en aura de nouveaux au cours des mois à venir."

Puis, remettant les rênes du pouvoir au Dr Williams, de Moncton (Nouveau-Brunswick), le Dr Utas s'est dit assuré que l'association sera dirigée par un gentilhomme dévoué et consciencieux.

Le Dr Williams a répondu: "Je relève le pari de la présidence, sachant que la technique du "management" est bien en place dans la conduite de l'association et lui donne une direction collective qui lui est fort utile".

Il a ajouté que les questions fiscales continueront d'avoir une grande importance et que les plans d'avenir s'inspireront des orientations de la conférence sur les questions prioritaires.

Le Dr Williams a souligné aussi qu'il était indispensable d'avoir de bonnes relations avec le gouvernement.

"De nos jours, marqués par les problèmes de la consommation et l'intervention gouvernementale, il faut, plus que jamais, que l'association se manifeste ostensiblement sur la colline parlementaire. Ce n'est pas seulement nécessaire, nous sommes tenus de le faire."

Le Dr Williams s'attend à ce que cette présence de l'ADC à Ottawa soit telle que l'Association sera consultée chaque fois qu'il y sera question de dentisterie.

Tout en continuant d'écouter, il a l'intention, à titre de président, de faire entendre la voix de l'association.

"Retenez ceci, dit-il. Pour s'entraider de façon efficace et dégager une opinion générale, il faut de la communication... Il est important, pour l'avenir de l'Association, que chaque membre s'exprime.

"Allons de l'avant dans les années 80 et préparons-nous à célébrer le 80^e anniversaire d'une association qui sera forte et vigoureuse", de conclure le Dr Williams.

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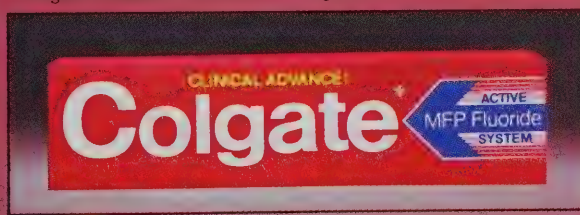
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*Published by the British Dental Journal, October, 1980.

**Evaluation of the National Institute of Dental Research National Caries Program. Volume 1, November, 1979, Page 56.



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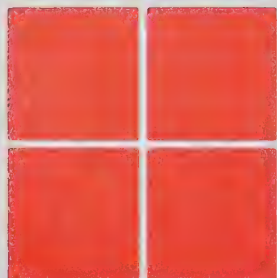
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under the sponsorship of your national and provincial professional associations.

Rocket trying to convince consumers, peers

I have seen a number of articles appearing in numerous newspapers within the last few months describing, and possibly indirectly promoting the "nouveau" type of delivery of dental services to the public. Dr. Rocket's Dental Centre must be the one most commonly referred to when this concept is discussed. (See the July, 1981, issue of the Journal).

Accepting the fact that most new, unusual and avant garde ideas must be heavily publicized, I have tried to ignore most of those articles until I recently saw the July issue of the CDA Journal. Having had an article published in that magazine, it seems rather obvious to me that Dr. Rocket is not merely trying to convince the consumers, but also his peers. At least the headline of the article seems to be a fair indication of that.

I do not believe that the dentists of Ontario are afraid of Dr. Rocket. They are merely concerned. The idea is not really new and it is not Dr. Rocket's brainchild. The same concept of dental delivery service has been practised in the United States with various degrees of success for the last several years.

The dental profession is standing at a crossroads. We all must recognize the changes that are undoubtedly taking place and we must be able to adapt to those changes. However, we also ought to be able to scrutinize where some of those changes might lead us. We ought to be able to shape our own future, which is in our own profession.

Several statements by Dr. Rocket probably deserve particular attention. It is a well-known fact that a person can follow an impeccable logic and still end up with totally wrong results merely by starting with wrong premises.

Dr. Rocket seems to resent people calling his concept department store

dentistry... He is either entirely missing the point or at least he wants us to believe it. It is not the location that carries any importance, it is the total philosophy of the concept which lends itself very easily to advertising and all other business practices not commonly engaged in by our profession.

I have heard voices advocating acceptance of some business practices in our profession and I am willing to listen with an open mind. However, how does anybody draw the line? One of the basic attributes of business is competition, whereas one of our professional axioms has always been co-operation.

Toronto dentist appalled at story

I was appalled at the article which appeared in the recent C.D.A. Journal featuring Dr. Howie Rocket and his views on department store dentistry. I am also surprised that the editorial board would further his cause by providing him with free Canada-wide advertising.

I could respect him if he were to come out and simply say that the reason he is setting up all these department store offices is to make a lot of money, however I cannot swallow all that garbage about doing it for the good of the public.

If what Dr. Rocket claims is true about the new graduates wanting to work in this type of environment then I also question the guidance these students are getting at the Faculty of Dentistry. I have also been told that Dr. Rocket had been invited to lecture to the dental students on his department store dentistry theories. If this is correct, then the University of Toronto, Faculty of Dentistry is making a complete mockery of the R.C.D.S.

There is a great difference between

...Dr. Rocket dislikes being accused of doing all this just for money. He says he could make a lot more money by staying in his own practice.

... There is always a possibility of a failure in any new venture or business operation, but that is a calculated risk that must be taken. On the other hand, if the operation is successful in the magnitude as planned, Dr. Rocket's statement have as much validity as perhaps a corporate ownership of a major national grocery chain claiming that they would be financially better off owning just one variety store.

*Dr. R.F. Jezdinsky,
Chelmsford, Ont.*

a profession and a business and one cannot cross that barrier. What is acceptable in business is not necessarily proper in a profession. I fully agree with Dr. Rocket that things are changing in the profession of dentistry, but to my way of thinking they are changing for the worst.

I consider myself fortunate to have graduated at a time when dentistry was a highly respected profession. I also consider myself fortunate to have been taught by the likes of Dr. Sandy McGregor, Dr. Geo. Morgan, Dr. Jack Kreutzer, Dr. James Purves, Dr. Kenneth Pownall, and Dr. P.G. Anderson. These people were, and still are, the epitome of the profession, the likes of which we may never see again.

We can no longer afford to dodge our responsibilities to the profession. Unless we reshape our destiny, Dentistry will be taught at a Community College in the not too distant future.

*Dr. Joseph Druck
Toronto*

Letters

"Not on your life"

The Old song goes "you gotta accent the positive and eliminate the negative." This thought negates the invitation of department store merchandising of dental services, as supported by your recent article in the CDA Journal.

The profession, and I repeat, the profession of dentistry consists solely of the provision of continuing competent dental services rendered by a practitioner, selected by the patient. The aim of the profession is to provide a broad spectrum of care, designed to maintain the dentition of the patient as long as is feasible.

Where, oh where is any positive adherence to the professional ethic when no dentist in particular is charged with the ultimate responsibility of continuing care? Patients require the ongoing care of an ethical dentist who has a treatment plan, a

home care regime designed for the maximum care of that person's dentition as long as he shall live. Can any department store philosophy approach this objective? Not on your life!

I still say accent the positive. That is the role of the true professional dentist — not the other breed!

*Dr. James D. Purves,
Toronto*

Comment offered

I wish to comment on the excellent and concise summary of intraoral ulcerative lesions by Dr. Fargher in the May issue. Although he was clearly unable to cover all intraoral ulcerative lesions in so short a space, I feel he omitted a clinically significant category that is sufficiently common to receive some mention.

The lesions of pemphigus, and to some extent mucous membrane pemphigoid, frequently are not seen

with clinically obvious bullae because these can break down rapidly. The patient then presents with persistent and painful intraoral ulcers. In my own clinical experience, these chronic oral ulcers can precede skin lesions by as much as 18 months. Such oral ulceration is frequently a first sign of the disease in pemphigus and pemphigoid. In addition there may be varying degrees of desquamative gingivitis.

The dental profession has an opportunity for the early diagnosis of the oral manifestations of pemphigus and pemphigoid so that appropriate treatment can be undertaken at the earliest opportunity. To confirm the diagnosis of pemphigus or pemphigoid, further investigation, such as biopsy of the edge of the lesions for immunohistology should be undertaken. These two conditions should always be considered as an alternative diagnosis in persistent and possibly painful intraoral ulceration.

*Dr. Michael Eggert,
London Hospital Medical College*

interim relief

initial fitting ← → adjustment visit

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Une image réaliste

Il est agréable de constater, à la lecture des derniers numéros du Journal de l'A.D.C., qu'on y a laissé un peu de côté les nouvelles sociales pour nous présenter du matériel bien étoffé concernant les nouvelles dimensions que prend notre profession.

Aurait-on enfin décidé d'appeler les chose par leur nom dans le monde merveilleux de la dentisterie? Après cet excellent article sur la capitation, la présentation de ce promoteur de dentisterie à rayons (Juillet 1981) peut être choquante à prime abord, mais je souhaite que vos lecteurs réalisent qu'il s'agit là aussi d'un phénomène très actuel et qu'il serait malhonnête pour nos dirigeants de refuser d'en discuter ouvertement.

Au moment où la pratique privée subit de profondes transformations, il est rafraîchissant de penser que des gens qui sont au cœur de l'action nous fourniront une information intégrée et une image réaliste de la situation avant que nous soyons encore une fois mis devant le fait accompli et ayons

perdu un peu plus de notre autonomie au profit de quelques uns.

Je vous présente, chère madame, mes filicitations et mes hommages.

Dr Paul Morin
Montreal

Régime d'épargne-retraite de l'ADC

Les valeurs respectives du Régime d'épargne-retraite de l'Association Dentaire Canadienne étaient les suivantes au 31 sept 1981.

<i>Fonds d'actions ordinaires</i>	\$48.7606
<i>Fonds à revenu fixe</i>	\$22.8246
<i>Fonds garanti</i>	\$21.1725
<i>Fonds de placement</i>	\$11.2310

L'avoir total (valeur marchande) du régime s'élevait à \$29,832,661.

Au 31 août 1981, les chiffres du mois précédent étaient les suivants:

<i>Fonds d'actions ordinaires</i>	\$52.6154
<i>Fonds à revenu fixe</i>	\$23.0438
<i>Fonds garanti</i>	\$20.8904
<i>équilibré</i>	\$12.0820

L'avoir total (valeur marchande) du régime s'élevait à \$31,230,817.

Pour obtenir tout renseignement supplémentaire, prière de s'adresser aux: Régimes des rentes et d'assurances subventionnés par l'ADC, P.O. Box 7500, Station A, Toronto, Ontario M5K 1A0.

soulagement temporaire

insertion initiale

corrections subséquentes



des malaise "d'ajustement" des dentiers

Entre l'insertion initiale du dentier et les corrections subséquentes, même les prothèses les mieux ajustées peuvent causer des douleurs et irriter les gencives. Ora-jel/d peut soulager ces malaises désagréables.

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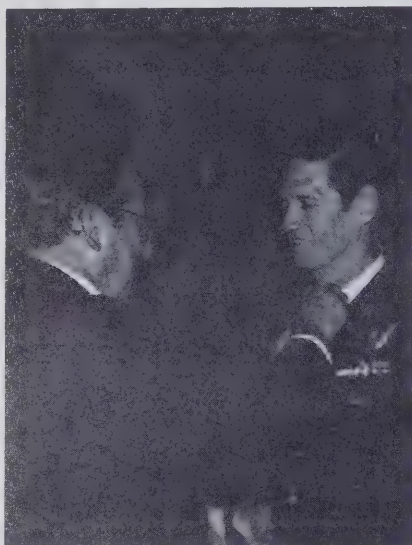
Donc, après la première insertion des dentiers recommandez Ora-jel/d pour apporter un apaisement rapide et durable de l'irritation.

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In the News

Brig.-Gen. Thompson wins FDI award



Professor Louis Baume, president of FDI makes the presentation to CDA president-elect Brig.-Gen. W.R. Thompson.

Brig.-Gen. W.R. Thompson, the new president-elect of the Canadian Dental Association, received a Merit Award from the Federation Dentaire International September 6 in Rio de Janeiro.

He was one of only two recipients honored by FDI President Professor Louis Baume at the annual meeting.

Chairman of the Defence Forces Dental Services Commission of the FDI from 1975-80, Dr. Thompson stated the Merit Award "indicates recognition of the progressive development of the Commission of Defence Forces Dental Services in the past few years into a strong and widely represented division."

Dr. Thompson is a native of Campbellford, Ont. and graduated from the

University of Toronto in 1949. He received certification in oral surgery from the same school in 1969.

He served first as an instructor at the Canadian Forces Dental Services School at Camp Borden from 1961-65 and currently holds the position of Director General Dental Services.

In 1973 he was made a Fellow of the International College of Dentists and acted as honorary dental surgeon to the Queen.

Dr. Thompson was also made a Fellow of the Royal College of Dentists and received the Pierre Fauchard Medal from the National Order of Dentists of France in 1979.

He became a member of the CDA Executive Council in 1980.

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merisation of dental restorative materials, and unlike phosphate cement is non-porous. As every dentist knows, a cement must set quickly, but still allow adequate working time in the mouth. With Durelon, optimum strength is reached after only 30 minutes.

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Congress on handicapped set for Toronto

The Sixth Congress of the International Association of Dentistry for the Handicapped will take place in Toronto at the Harbour Castle Hilton Hotel from July 20 — 25, 1982.

The general program will include

scientific sessions in: Basic Science; Research; Growth and Development; Clinical Dentistry and Psychology.

The Congress will also feature audio visual capability, posters, abstracts and a complete social program.

Papers and other materials related

to dentistry for the handicapped (including cleft palate) should be submitted to Program Chairman, Sixth Congress IADH, Department of Paedodontics, Faculty of Dentistry, 124 Edward Street, Toronto, Ontario M5G 1G6.

Orthodontic groups elect officers

Both the Quebec Orthodontics Association and the Ontario Society of Orthodontists held elections for their 1981-82 executive members recently.

Elected at the annual meeting of the Quebec Association of Orthodontists were: President René Bourcier; President-Elect Oleg Kopytov; 1st Vice-President Sheldon Dorfman; 2nd Vice-President Michel Brousseau; Secretary Madeleine De Grandmont; Treasurer Eric Reich; Archivist Morris Wechsler; Member without Portfolio André Gravel; and Past-President Stephen Miller.

Serving on the executive board of the Ontario Society of Orthodontists are: President Bryan Smith; Past-President Raymond Bozek; Vice-President Howard Tile; and Secretary-Treasurer Malcolm Yasnay.

Speaker

British dental research scientist and author, Dr. John W. McLean of London, England, will be featured at the Miami Winter Meeting January 28-30, 1982.

Dr. McLean will explore alternatives to high gold alloys and will evaluate the new low viscosity water-based glass-ionomer cement during his two half-day seminars on "New Technology in Dental Porcelain and Cements".

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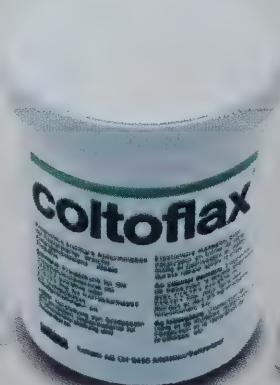
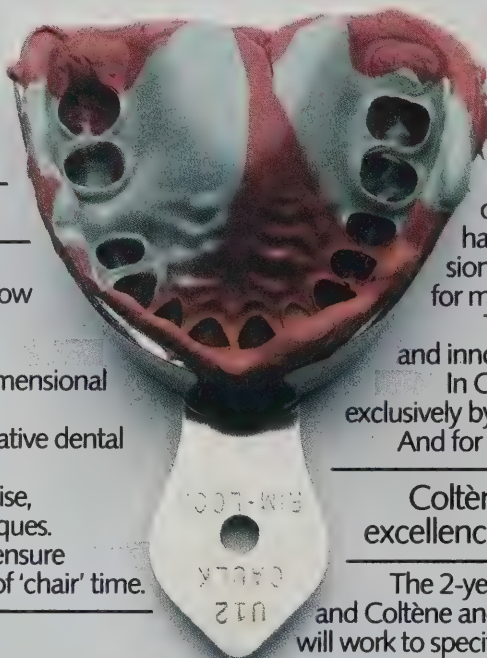
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Fluoruration — les faits parlent d'eux-mêmes	\$10.00/100	_____
Protégez votre bouch! (protecteurs faciaux et buccaux)	\$10.00/100	_____
Sauvez vos dents — attaquez-vous à la racine du mal (endodontie)	\$10.00/100	_____
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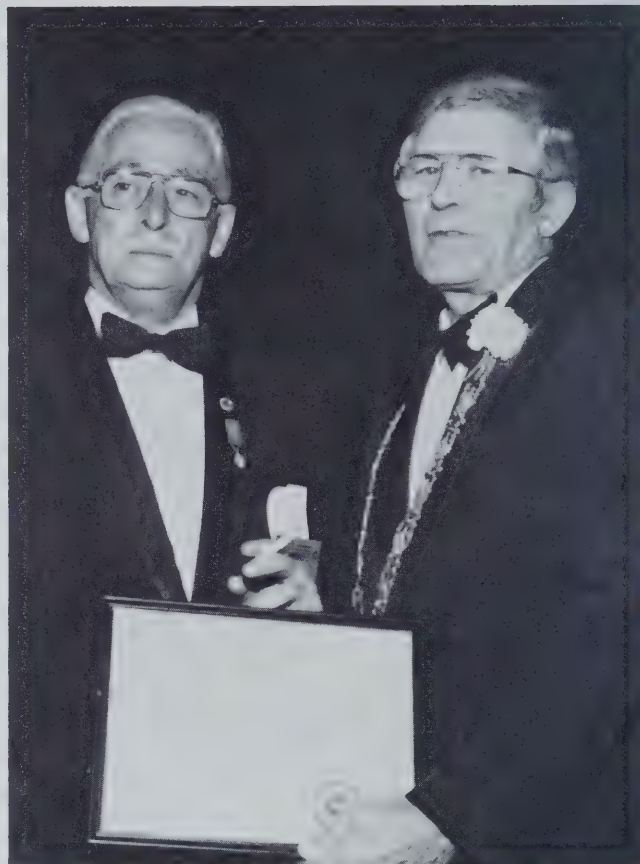
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Two former CDA presidents given honorary memberships



Drs. George M. Dewis and Philip S. Christie, both of Nova Scotia, receive their awards from Dr. Gilbert Utas.

Dr. George M. Dewis and Dr. Philip S. Christie have been awarded honorary membership in the Canadian Dental Association.

The awards were made at the CDA Annual Meeting in Calgary in September.

Honorary membership is the association's highest award and is conferred on those who have rendered exceptional "constructive services nationally or internationally in any field of dentistry."

Dr. Dewis, of Halifax, is a native of Boston and graduated from Dalhousie University in 1928. He has been a member of the Faculty of Dentistry there for 37 years.

He was appointed a lecturer in 1940; assistant professor in 1946; associate professor in 1950; and professor in 1952.

He served as president of CDA from 1958-59 and was a member of the CDA board of governors from 1950-60. Dr. Dewis was also treasurer from 1960-70.

From 1941 to 1968 he was secretary-registrar of the Provincial Dental Board of Nova Scotia, and has served with the Halifax County Dental Society and Nova Scotia Dental Association.

Dr. Christie also graduated from Dalhousie, in 1939.

He served with the Canadian Dental Corps (Canada and U.K.) from 1939-43 and has been in private practice since 1944.

Dr. Christie is also a professor of orthodontics at Dalhousie.

He was president of the CDA from 1965-66 and chairman of the board of governors from 1969-73.

From 1947-48 he was president of the Halifax County Dental Society and president of the Nova Scotia Dental Association from 1953-54.

Dr. Christie has also been associated with the Society of Dental Specialists of Nova Scotia, the International College of Dentists, is a charter fellow of the RCDC and a member of the Pierre Fauchard Academy.

Edith Schmidt receives distinguished service award

After nearly 20 years with CDSPI, Edith Schmidt knows all about planning for the future.

Unlike many people, she's determined her retirement will be just as active as the years she has spent working.

As general manager of the dental insurance firm since 1975, Mrs. Schmidt has been involved in a wide range of challenges and changes during the past years.

However, effective July 1, 1981, her long career with CDSPI, where she began working as an accountant in 1962, ended. It was a personal change she faced with mixed emotions.

Although she will miss the people she has met, Mrs. Schmidt is well-prepared for the years ahead.

"There comes a time when you have to turn your mind from ordinary daily work to other things," she said. "But I'm certainly not going to sit here knitting. And I certainly don't intend



Mrs. Edith Schmidt, former general manager of CDSPI accepts flowers and congratulations from Dr. Donald Williams upon receiving the CDA distinguished service award. Dr. Gilbert Utas looks on.

to get back into the labor force."

What she does intend to do is travel.

A cruise to the Caribbean last spring made her long for distant places. After her retirement, Mrs. Schmidt travelled to her native Norway, where she began her working career teaching high school. She had visited Scandinavia for a few weeks in previous years, but she had never spent an extended holiday.

Other plans include reading his-

torical literature, a favorite hobby, and studying Spanish.

When asked about the changes at CDSPI she has witnessed, Mrs. Schmidt said it's "amazing" what can happen in 20 years.

"Changes are necessary," said Mrs. Schmidt. "You have to keep moving ahead. Nothing can remain static.

"People involved in organized dentistry understand that. They have adapted to a changing society which is very important."

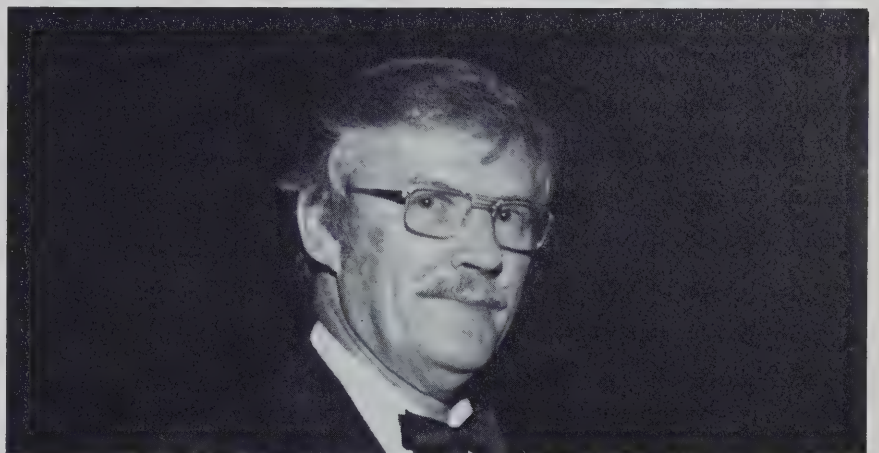
Alberta dentist R.A. Gray receives CDA award

An Alberta dentist with a long history of involvement with his profession has received the "Distinguished Service Award" from the Canadian Dental Association.

Dr. R.A. Gray has served his profession on a provincial, national and international level.

President of the Alberta Dental Association from 1966-67, he then served on the CDA Board of Governors for 1969-77. Dr. Gray was also a member of the CDA Executive Council for 1975-77 and on the Alberta Dental Association board from 1961-68. He is a Fellow of the International College of Dentists and a member of the Pierre Fauchard Academy.

The Distinguished Service Award is presented to those who have given outstanding service to the assoc-



Dr. R.A. Gray was presented with his award by Dr. Gilbert Utas

iation. Dr. Gray received his award at the CDA Annual Meeting in Calgary.

A native of Rocanville, Saskatchewan, he graduated from the University of Alberta in 1950. He has practised

in Medicine Hat, Alberta since 1957.

Dr. Gray is married and has six daughters. His hobbies and interests include photography, metal detecting, CB radio and reading.

Caution Withholding Tax on Commissions

Prior to 1981, employers were generally required to withhold income tax on salaries and wages paid to employees. As of last January 1, this obligation was extended to cover commission earnings paid to employees. Under the Income Tax Act, an employer who does not withhold this tax is liable for 10 per cent of the amount required to be withheld and may be subject to a fine of not less than \$200 nor more than \$10,000 and imprisonment for up to six months.

Rules are of concern

The new rules are of concern to the profession. Some dentists may be employing other dentists or staff, remunerating them by way of commission and not withholding tax when the latter are legally "employees". Unfortunately, the Income Tax Act does not provide a comprehensive definition of either "commission" or "employee" and, consequently, it is often difficult to determine if the new rules apply to a particular situation.

Alerting the profession

However, Revenue Canada will be closely scrutinizing working arrangements which have the trappings of an employer/employee relationship and where no withholding tax is currently being withheld. The purpose of this article is to alert the profession to the potential tax liability and to highlight some of the principal modes of the employer/employee relationship to assist members of the profession

in determining if they are in fact employers remunerating by commission and if further tax advice is required.

A person remunerating an individual by way of commission must determine whether or not that individual is an employee or an independent contractor. In the latter case, the withholding of tax is not required. The related question of whether or not an employee is receiving commissions is secondary because, if he is not receiving commissions, his remuneration is likely salary or wages, also requiring the withholding of tax.

The Income Tax Act defines "employee" as an individual in the service of some other person. The implication is that an employee is under the direction and control of the other person.

Brief summary

It is the character and degree of this direction and control which adjudicating authorities assess in determining if, in substance, an employer/employee relationship exists. The following is a brief summary of some of the key factors to be considered. The presence or absence of any particular factor is generally not conclusive.

Will be seen as employee

The less control an individual has over the essentials of his dental practice, such as hours and regularity of work, patients to be seen and work to be done and how it is to be performed, and the greater the supervision of that individual in the performance of his

duties the more likely he will be seen as an employee.

Generally speaking, the tax authorities will look to who has the investment risk, who has the responsibility for bringing in the business and who is held out to the public as the principal in the practice. It may be that anyone working with him who does not share those responsibilities and is getting paid on a production or profit basis would be seen as an employee.

Participation in employee plans

The participation by an individual in any pension plan, deferred profit sharing plan or health plan which, by law, is for employees only will suggest that he is an employee.

On the basis of the foregoing general outline of the law, it is apparent that there is a substantial element of uncertainty in determining whether an employer/employee relationship exists for income tax purposes. The essential point is that if one is associated with other dentists and ultimately bearing the risk and the responsibility for the most significant decisions of the dental practice while the associated dentists or other persons simply perform dental services, then that person should closely analyze this association with his legal and tax advisors to assess whether or not he is in fact an employer responsible for withholding on payments to such associated dentists or other persons.

It should be noted that Revenue Canada is prepared in certain circumstances to reduce or eliminate the amount of tax required to be withheld for any particular taxation year by the employer if the employee can demon-

strate that he has extraordinary deductions from income which will result in his being entitled to a refund on the amount proposed for with-

holding. To obtain this concession the employee must provide complete financial disclosure to the District Taxation Office which has a commit-

tee to review such matters.

In conclusion, the precise legal relationship a dentist has with those he works with can have a material impact on tax as well as other legal matters. For instance, the dentist, as employer, could, in varying circumstances, be personally liable for acts of his "employees" while not liable for acts of an independent contractor who works with him. Care in assessing the true nature of a working relationship for tax purposes is of utmost importance, and as is often the case, can assist in evaluating other important considerations.

*This material was prepared
by Toronto lawyer
David McLean*

The instructions of Revenue Canada to employers regarding tax deductions from commission remuneration are set out below as published at p. 11 of the 1981 Tables entitled "Income Tax Deductions at Source":

Tax Deductions From Commission Remuneration— Instruction to Employers

If you are remunerating an employee on a commission basis or salary plus commission, various tax deduction options are open to you.

(1) Many employers pay commissions to employees in addition to a regular salary. In a large number of cases the employee does not incur any expenditure in earning the commissions. If the commissions are generally disbursed to the employee at the time the salary is paid, the amount of the commission may be added to the salary amount and the regular tax table method utilized. If, however, commission payments are periodic, the "bonus" method may be used to determine the tax withholding on the commission payment.

(2) If the employee receives commissions and will incur personal expenditures in the course of earning the income the employee may complete form TDIX using one of two methods to estimate income and expenses. By reference to the new Tax Deduction Table from Commission Remuneration contained in this publica-

tion and the employee's form TDIX, a percentage figure will be determined which should be applied to each "gross" amount of commission paid (the word "paid" should be interpreted to include any amount credited to the employee's account and which the employee is entitled to receive under the contract of employment) to the employee. If the employee receives a salary as well as the commission, the annual salary is to be included in the total remuneration on form TDIX. The resulting percentage will then be applied to the salary payments as well as the commissions payments.

If during the course of the year the employee wishes to adjust the estimate of Remuneration, Exemptions and Expenses as declared at the commencement of the year or at the commencement of the employment, a newly completed form TDIX must be filed with the employer.

In the cases where an officer or employee elects not to file a form TDIX, withholding of tax at source will be required using the normal rules for the determination of the amount to be withheld. Where due to lack of conformity between the period in respect of which the commission is paid and the pay periods set out in the Schedules, it is not possible to utilize the regular tables, withholding should be made in accordance with the provisions of Income Tax Regulation 106.

Kenny appointed in Toronto

Dr. David J. Kenny was appointed Dentist-in-Chief at the Hospital for Sick Children in Toronto, effective July 1, 1981.

Dr. Kenny was associated with the Children's Hospital of Eastern Ontario in Ottawa from 1977 to 1981 as Chief of Dentistry.

Dr. R. Bruce Ross, former Dentist-in-Chief at the Hospital for Sick Children will be on study leave until July, 1982, and will return as Head of Orthodontics.

During Dr. Ross' absence, Dr. Arlene Dagys will be acting Head of Orthodontics until January, and Dr. David Engel will assume the position until July, 1982.

The FDI — A Forum for International Dentistry

George S. Beagrie DDS(Edin.), FDSRCS(Edin.), FRCD(C), FICD

Dean, Faculty of Dentistry
The University of British Columbia
Vancouver, British Columbia

Dr. Beagrie has served as a consultant, member and vice-chairman of the Commission on Dental Education and was a member of the FDI/IADR liaison committee from 1976-78.

He was recently re-elected to the Commission on Dental Education and Practice.

The dental profession, like other professions in Canada, organizes itself in provincial associations, local societies and the national association level so common problems can be discussed and solutions found for better service to the population. International dentistry utilizes the same method through the forum of the Federation Dentaire Internationale (FDI).

The FDI had its beginnings on Aug. 15, 1900, through the actions of six dentists who were major leaders in their own countries. They were Charles Godin (France), Florestan Aguilar (Spain), George Cunningham (England), Elof Forberg (Sweden), A.W. Harlan (U.S.A.) and E. Sauvez (France). This group founded the precept of international representation of the dental profession without distinction by nationality. At that time, there was world-wide concern about standards of education and training of dentists, and it was thus understandable that many of the early efforts of the founders were directed to an International Commission of Dental Education.

From these early beginnings, the FDI of today has expanded into the

most representative professional international body in the world, and it carries an enviable reputation amongst the health professions. In acting as the non-governmental political arm of organized dentistry, it helps direct dental health policy through the World Health Organization, and collaborates with other international organizations, such as the International Standards Organization and the International Association for Dental Research, which are affiliate members. It can influence the delivery methods of dental care to world populations as well as research approaches, equipment design, materials, ergonomics, and a host of other common concerns.

The Organization

The FDI now has 81 regular member nations, three regional organizations and three secretariats. In addition, there are 11 affiliates, such as the International Association for Dental Research, International Association of Dental Students and International College of Dentists. At the 1980 Annual Meeting in Hamburg, delegates from 80 countries attended.

The General Assembly of the FDI is the supreme legislative governing body, and is composed of delegates from all voting member associations. Council acts as the administrative body between general assemblies, delegates executive action and reports to the General Assembly.

The Commissions

Commissions of the Federation

continue to form the "workhouse" of the organization. The original Commission on Dental Education was established to formalize program standards and curricula for dentistry. At the present moment, there are four commissions in the structure:

Commission on Oral Health
Research and Epidemiology
Commission on Dental Education
and Dental Practice
Commission on Dental Products
Commission on Defense Forces
Dental Services

Each commission is organized into working groups which are given designated tasks and from which specific reports are presented through the commissions to the General Assembly.

Each commission requires consultants. These are appointed through the national associations to represent both their country and their specific personal interests. It is of paramount importance for member associations to propose consultants to the commissions, since in this way the expertise of consultants is not only correctly designated by the member association, but the consultant is made aware of the responsibility that the national association is giving him/her in representing his/her country.

The Commission on Oral Health Research and Epidemiology has 138 consultants with only three representatives from Canada — not enough! Working groups are examining and reporting on:

1. Dental care of the pre-school child
2. Dental caries studies to advise on

the techniques for prevention of caries and cost benefit analyses

3. Oral health promotion
4. Dento-facial anomalies
5. Developmental defects of enamel
6. Epidemiology of periodontal diseases
7. Oral manifestations of diseases resulting from the environment.
8. Oral implantology.

The Commission on Dental Education and Practice has 115 consultants, with only two from Canada. Working groups are examining and reporting on:

1. Portability of licence
2. Continuing dental education, with specific reference to the evaluation and measurement of effectiveness
3. The health of the dentist
4. Dental auxiliaries
5. Hygiene in dental practice
6. Dental manpower and education related to the needs of the community.

The Dental Products Commission is investigating the following:

1. Clinical testing of materials, instruments, equipment and therapeutics
2. Dental pharmacological materials
3. Relationships between the profession and dental industry and trade
4. Dental prophylactic devices, tooth brushes and other items
5. Toxicity of materials.

The Commission on Defense Forces Dental Services covers a wide variety of topics related to dental problems in the Armed Forces. For the past several years, the Commission has been ably chaired by Brigadier-General W.R. Thompson.

The reports of work of the commissions are all passed to the General Assembly for ratification before being made available to national associations. From the commissions, several reports have been approved in recent

years. These include specifications for dental units, glass-ionomer cements and acid etching procedures, as well as standards for dental amalgam.

The International Dental Journal is the official publication of the FDI and it is a worthwhile journal to keep. Published quarterly, it covers a wide range of subject matter and has an excellent supporting bibliography of all articles. The editor of the journal has an official position in the structure of the organization, acting through the Publications Committee and Council. In addition to the journal, several publications of importance to dentistry have been produced. One of these — "Social Sciences and Dentistry" — is a basic textbook on the subject, and was the stimulant of much-needed interest in behavioral science for the application of preventive control of dental disease.

The scientific programs of the FDI are designed for an international audience of practitioners. In such a forum, opportunity is given for "idea exchange" between colleagues from other countries. Related to each meeting is an international Trade Show which in turn exposes participants to new ideas, new materials and new

equipment. Friendships gained from international meetings make for more interesting visits to foreign countries.

In the same way as the Canadian Dental Association requires the interest and commitment of the membership to give it strength at a national level, so too does the FDI rely on your input to make it strong internationally.

No organization, whatever its function, is perfect. However, it is easier to correct any faults as a member from within, rather than staying on the outside and criticizing. International non-governmental organized dentistry (FDI) needs the expertise of Canadian dentists to give impetus as it moves toward improved dental services for mankind.

The World Health Organization has set certain goals for oral health for the year 2000. Many of these goals have already been achieved by organized Canadian dentistry. The "know-how" of Canadian dentists is needed to help the less fortunate populations of the world. The FDI is the instrument to help achieve these goals on a world-wide basis, and membership in the FDI is the essential step in the process.

CDA Retirement Savings Plan

Unit values of the Canadian Dental Association's Retirement Savings Plan stood as follows on September 30, 1981.

<i>Common Stock Fund</i>	\$48.7606
<i>Fixed Income Fund</i>	\$22.8246
<i>Guaranteed Fund</i>	\$21.1725
<i>Balanced Fund</i>	\$11.2310

Total assets (market value) of the plan were \$29,832,661.

The previous month's figures, as of August 31, 1981, stood as fol-

lows:

<i>Common Stock Fund</i>	\$52.6154
<i>Fixed Income Fund</i>	\$23.0438
<i>Guaranteed Fund</i>	\$20.8904
<i>Balanced Fund</i>	\$12.0820

Total assets (market value) of the plan were \$31,230,817.

For further information write to: Canadian Dental Service Plans Inc., P.O. Box 7500, Station A, Toronto, Ontario M5K 1A0.

Purchasing Electrical Equipment: Legal Pitfalls

The laws that regulate the use of electrical equipment across Canada are not widely understood, despite the fact that they exert a vitally important influence on our everyday lives and on the dentist's practice.

Basically, the regulations in force in the provinces and the major cities across Canada state it is an offence to offer for sale, sell, give away or use an item of electrical equipment which is not approved by the local electrical inspection authority (see Table 1).

These requirements seem, at first glance, to be nothing but bureaucratic red tape. Remember, however, that red tape was originally invented to bind up packages of legal documents, protecting the lawyer and his client from loss or tampering. The regulations and standards for electrical equipment have a similar purpose. They are designed to minimize the risk of fire or electrical shock.

By making sure that his equipment has the approval of the local inspector, the dentist is protecting his patient, and, in the unlikely event that an accident occurs and a negligence suit is launched, protecting himself, because he will be better able to demonstrate that he took all reasonable precautions to prevent the occurrence.

The dentist considering the purchase of equipment should be aware of the precautions he should take, particularly if he is making his purchase at a dealer's booth at a conference.

Because all inspection authorities accept CSA certification as evidence of compliance with their requirements, the first step with any line-powered equipment is to look for the CSA certification mark. This consists of the CSA logo and reference to the identification number of the appropriate CDA Standard. For X-ray Equipment, this is Standard "C22.2 No. 114".

Laboratory equipment, that is equipment which is not used directly

in treating the patient, should be marked "C22.2 No. 151".

Any electrical equipment used within arm's reach of the patient is classed

Table 1

Regulatory Authorities on Electromedical Equipment

A/Electrical Authorities

B.C.	1. Chief Inspector of Electrical Energy MINISTRY OF LABOUR Safety Engineering Services Division 501 West 12th Avenue Vancouver, B.C. V5Z 1M6
	2. Chief Electrical Inspector CITY OF VANCOUVER Department of Permits and Licenses City Hall — East Wing 453 — 12th Avenue Vancouver, B.C. V5Y 1V4
Alta.	1. Chief Electrical Inspector DEPARTMENT OF LABOUR General Safety Services Division 8th Floor, IBM Building 10808 — 99th Avenue Edmonton, Alberta T5K 0G5
	2. Chief Electrical Inspector CITY OF CALGARY ELECTRIC SYSTEM 2808 Spiller Road, S.E. Calgary, Alberta T2P 2M5
Sask.	Chief Inspector Electrical and Elevator SASKATCHEWAN DEPARTMENT OF LABOUR Occupational Health and Safety Division 1150 Rose St. Regina, Saskatchewan S4R 1Z6
Man.	1. Chief Electrical Inspector MANITOBA HYDRO Regional Services Department P.O. Box 815 Winnipeg, Manitoba R3C 2P4
	2. Electrical Inspection Engineer THE CITY OF WINNIPEG 100 Main Street Winnipeg, Manitoba R3C 1A5
Ont.	Chief Electrical Inspector ONTARIO HYDRO 700 University Avenue Toronto, Ontario M5G 1X6

as Electromedical Equipment and should be marked "C22.2 No. 125" and also with a "Risk Class" number. This Risk Class is an indicator of the amount of current which might flow through the patient. Risk Class 1 is

adequate for most equipment. Risk Class 2 indicates a greater degree of protection. Thus, any apparatus which uses an electrical current for measurement or treatment should meet these requirements. Risk Class 3

gives the most protection, but is usually reserved for equipment to be connected directly to the heart or to major blood vessels.

If a device does not bear the CSA mark, it is not certified, and the dentist should ensure that the electrical inspector's approval sticker is present. If it is not, the inspector should be called to examine the equipment.

In addition, federal law requires that anyone selling medical devices, that is "equipment used in the diagnosis or mitigation of a disease state", notify the Bureau of Medical Devices, Health and Welfare Canada of his activity. Most Canadian distributors comply with this regulation. American or other foreign concerns may not. A dentist who purchases equipment from such a company is exposing himself to additional risk in the event of an accident, and may be endangering his patient.

It is generally agreed that battery-powered equipment should meet the same requirements as line-powered devices. At present, however, there are no laws to enforce these requirements. The Bureau of Medical Devices is in the process of drafting legislation which will have this effect.

One important point with battery-powered electromedical equipment (see reference above to Standard C22.2 No. 125) is to avoid the temptation to use a battery eliminator unit to power it from a wall outlet. This is a potentially dangerous assembly unless it has been inspected and approved.

While regulations and standards are sometimes a nuisance, their enforcement helps protect us all. The authorities faced with the infinite task of enforcement are hampered by finite human resources. We must all, therefore, do our part to make certain that the best possible standard of safety is maintained.

This material was prepared by T.W. Walker, PH. D., P. Eng., Health Care Technology Program, Canadian Standards Association

Que. Chief Inspector (Electrical)
QUEBEC DEPARTMENT OF LABOUR & MANPOWER
Board of Examiners of Electricians
255 Cremazie Blvd. E.
Montreal, Quebec H2M 1L5

N.B. Electrical Inspection Engineer
NEW BRUNSWICK LABOUR AND MANPOWER
Building Standards Branch
P.O. Box 6000
Fredericton, New Brunswick E3B 5H1

N.S. Chief Electrical and L.P. Gas Inspector
NOVA SCOTIA DEPARTMENT OF LABOUR
P.O. Box 697
Halifax, Nova Scotia B3J 2T8

P.E.I. Chief Electrical and Elevator Inspector
DEPARTMENT OF MUNICIPAL AFFAIRS
Electrical and Elevator Inspection Division
P.O. Box 2000
Charlottetown, P.E.I. C1A 7N8

Nfld. Chief Electrical Inspector
DEPARTMENT OF LABOUR & MANPOWER
Government of Newfoundland and Labrador
Electrical Inspection, Occupational Health & Safety Division
Confederation Building
St. John's, Newfoundland A1C 5T7

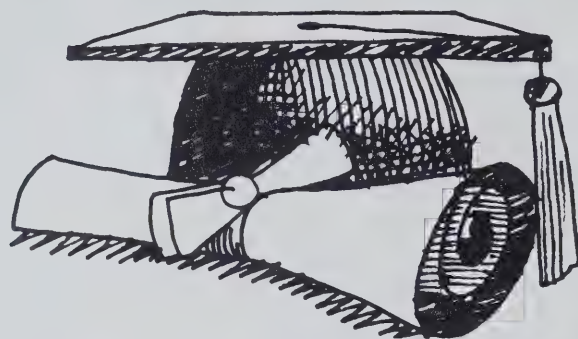
Yukon Chief Electrical Inspector
DEPARTMENT OF LOCAL GOVERNMENT
Government of the Yukon Territory
P.O. Box 2703
Whitehorse, Yukon Y1A 2C6

N.W.T. Electrical Inspection Authorities
DEPARTMENT OF PUBLIC SERVICES
Government Northwest Territories
Yellowknife, N.W.T. X1A 2L9

B/ Federal Authorities

Director
BUREAU OF MEDICAL DEVICES
Environmental Health Directorate
Tunney's Pasture
Ottawa, Ontario K1A 0L2

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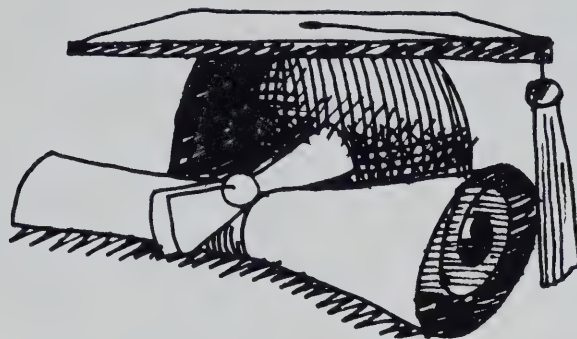
Canadian Fund for Dental Education,
Suite 205, 44 Eglinton Avenue West,
Toronto, Ontario M4R 1A1



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Fonds canadien pour l'enseignement dentaire
Bureau 205
44 ouest, avenue Eglinton
Toronto, Ontario M4R 1A1 .



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et le prestige de la profession.

Les Actualités

Comment éviter les pièges de la procédure dans l'achat de l'équipement électrique

Les lois qui régissent l'utilisation de l'équipement électrique au Canada ne sont généralement pas comprises, même si elles ont une portée vitale dans notre vie de tous les jours, y compris la pratique de la médecine dentaires.

La réglementation en vigueur dans les provinces et dans les grandes villes du pays stipule, en somme, qu'il est défendu de mettre en vente, vendre, donner ou utiliser de l'équipement électrique qui n'est pas autorisé par l'inspecteur électricien local (voir la liste).

À première vue, cette exigence apparaît comme une tracasserie administrative, mais il ne faut pas oublier que les formalités ont été inventées pour donner effet à un ensemble de documents juridiques visant à protéger l'avocat et son client contre toute perte ou falsification. Ainsi en est-il des règlements et des normes concernant l'équipement électrique, qui ont pour objet de réduire au minimum le risque d'incendie ou de choc électrique.

En s'assurant que l'équipement a été approuvé par l'inspecteur local, le dentiste protège son patient et il se protège lui-même. S'il se voyait accusé de négligence à la suite d'un accident, il pourrait ainsi mieux démontrer qu'il a pris toutes les précautions raisonnables pour prévenir l'accident.

Le dentiste devrait connaître les précautions à prendre lorsqu'il se prépare à acheter de l'équipement, surtout à l'occasion d'une exposition ou d'une conférence.

Les inspecteurs acceptant le sceau d'approbation de l'Acnor (CSA) comme indication que l'appareil ou l'équipement répond aux normes, la première chose à faire c'est de vérifier si le sceau y a été apposé. Celui-ci comprend les lettres CSA et un numéro de référence à la norme en question. Pour les appareils de radiographie, ce numéro est "C22.2 N° 114". L'équipement de laboratoire, celui dont ne

se sert pas directement pour traiter le patient, doit porter le numéro "C22.2 N° 151".

Tout appareil utilisé à portée du

Tableau 1

Liste des instances de réglementation de l'équipement électromédical

C.-B.	1. Chief Inspector of Electrical Energy MINISTRY OF LABOUR Safety Engineering Services Division 501 West 12th Avenue Vancouver, C.-B. V5Z 1M6
	2. Chief Electrical Inspector CITY OF VANCOUVER Department of Permits and Licenses City Hall — East Wing 453 — 12th Avenue Vancouver, C.-B. V5Y 1V4
Alta.	1. Chief Electrical Inspector DEPARTMENT OF LABOUR General Safety Services Division 8th Floor, IBM Building 10808 — 99th Avenue Edmonton, Alberta T5K 0G5
	2. Chief Electrical Inspector CITY OF CALGARY ELECTRIC SYSTEM 2808 Spiller Road, S.E. Calgary, Alberta T2P 2M5
Sask.	Chief Inspector Electrical and Elevator SASKATCHEWAN DEPARTMENT OF LABOUR Occupational Health and Safety Division 1150 Rose St. Régina, Saskatchewan S4R 1Z6
Man.	1. Chief Electrical Inspector MANITOBA HYDRO Regional Services Department P.O. Box 815 Winnipeg, Manitoba R3C 2P4
	2. Electrical Inspection Engineer THE CITY OF WINNIPEG 100 Main Street Winnipeg, Manitoba R3C 1A5
Ont.	Chief Electrical Inspector ONTARIO HYDRO 700 University Avenue Toronto, Ontario M5G 1X6

patient entre dans la catégorie de l'équipement électromédical et doit porter le numéro "C22.2 N° 125" de même qu'un numéro indiquant la nature du risque, c'est-à-dire la tension du courant que peut recevoir le pa-

tient. Le risque de première catégorie se présente dans la plupart des appareils. Les appareils de la deuxième catégorie de risque offrent une meilleure protection; les instruments de mesure ou de traitement devraient

porter cette mention. Les appareils de la troisième catégorie offrent la meilleure protection; ainsi en est-il ordinairement de ceux qui se branchent directement au cœur ou aux artères.

Les appareils qui ne portent pas le sceau CSA ne sont pas autorisés. En outre, le dentiste doit s'assurer que l'appareil porte aussi le timbre de l'inspecteur électricien; à défaut de quoi, il devrait demander à ce dernier d'examiner l'équipement.

Par ailleurs, la loi fédérale exige que quiconque vend des appareils médicaux, servant à diagnostiquer la maladie ou à adoucir le mal, en informe le Bureau des instruments médicaux, Santé et Bien-être Canada. Si la plupart des distributeurs canadiens observent ce règlement, il n'est pas certain que les sociétés étrangères, y compris les américaines, le fassent. Le dentiste qui achète de l'équipement de ces entreprises prend un risque plus grand en cas d'accident et peut exposer ses patients au danger.

Il est reconnu généralement que les appareils fonctionnant avec des piles devraient satisfaire aux mêmes exigences que les autres appareils électriques. Pour le moment, cependant, ils ne tombent sous l'empire d'aucune loi. Le Bureau des instruments médicaux prépare actuellement un projet de loi à cet effet.

En ce qui a trait à l'équipement électromédical fonctionnant avec piles, il importe de résister à la tentation de se servir d'un transformateur pour le brancher à la prise de courant. Ceci peut-être dangereux à moins que l'appareil ne soit approuvé.

Si elle présente parfois des inconvénients, l'application des règlements et des normes nous protège tous. Ceux qui doivent veiller à cette application ont une tâche immense mais leurs ressources humaines sont limitées. Nous devons donc tous faire notre part pour assurer les meilleures normes de sécurité possibles.

par T.W. Walker, D. Ph., Ing. p. Technologie des soins de santé, Association canadienne de normalisation

- | | |
|---------|---|
| Qué. | L'inspecteur chef (Électricité)
MINISTÈRE DU TRAVAIL ET DE LA
MAIN-D'OEUVRE
Bureau des examens des électriciens
255 est, boulevard Crémazie,
Montréal (Québec) H2M 1L5 |
| N.-B. | Electrical Inspection Engineer
NEW BRUNSWICK LABOUR AND MANPOWER
Building Standards Branch
P.O. Box 6000
Fredericton, Nouveau-Brunswick E3B 5H1 |
| N.-É. | Chief Electrical and L.P. Gas Inspector
NOVA SCOTIA DEPARTMENT OF LABOUR
P.O. Box 697
Halifax, Nouvelle-Écosse B3J 2T8 |
| Î.P.-É. | Chief Electrical and Elevator Inspector
DEPARTMENT OF MUNICIPAL AFFAIRS
Electrical and Elevator Inspection Division
P.O. Box 2000
Charlottetown, Î.P.-É. C1A 7N8 |
| T.-N. | Chief Electrical Inspector
DEPARTMENT OF LABOUR & MANPOWER
Government of Newfoundland and Labrador
Electrical Inspection, Occupational Health & Safety Division
Confederation Building
St. Jean, Terre-Neuve A1C 5T7 |
| Yukon | Chief Electrical Inspector
DEPARTMENT OF LOCAL GOVERNMENT
Government of the Yukon Territory
P.O. Box 2703
Whitehorse, Yukon Y1A 2C6 |
| T.N.-O. | Electrical Inspection Authorities
DEPARTMENT OF PUBLIC SERVICES
Government Northwest Territories
Yellowknife, T.N.-O. X1A 2L9 |

B/Instances fédérales

Le directeur
BUREAU DES INSTRUMENTS MÉDICAUX
Direction de l'hygiène du milieu
Parc Tunney
Ottawa (Ontario) K1A 0L2

À la recherche d'une deuxième carrière?

Le Journal et d'autres publications ont publié, au cours de l'année, divers articles faisant état des changements que connaît la profession dentaire et portant sur divers sujets: surplus de la main-d'oeuvre, rareté des patients, augmentation des frais, élargissement du rôle des divers auxiliaires dentaires. On a aussi entendu parler de faillites et de dentistes à la recherche d'autres emplois pour arrondir leur revenu.

La nouvelle publication de l'ODA: *The Changing Dental Profession — New Directions for Practice in the 80's and Beyond* nous parle des changements que l'avenir nous réserve, tels l'établissement de boutiques dentaires dans les grands magasins, la rémunération par tête et la pratique en circuit fermé, le franchisage et l'établissement de succursales, autant d'expressions nouvelles pour la profession.

La hausse des intérêts et la participation au régime d'épargne-retraite, qui entraînent des déboursés immédiats, inquiètent beaucoup de dentistes, malgré la réduction d'impôt et la perspective d'un rendement futur en dollars dépréciés.

Beaucoup relèvent le défi avec succès et à juste titre, car c'est la seule façon d'assurer la survie de la profession — nous en sommes convaincus. Certains — espérons qu'il y en aura peu — tomberont et joindront les tenus pour compte. Il y en aura quelques-uns qui, malheureusement, sacrifieront les normes pour s'assurer un revenu élevé. D'autres encore choisiront une tout autre voie et chercheront, dans le domaine dentaire, d'autres débouchés leur permettant de continuer à utiliser leur compétence sans compromis.

Les services de la santé publique nous offrent un de ces débouchés et le présent article informe les dentistes des possibilités de carrière qu'ils

peuvent trouver dans l'administration fédérale.

Auparavant, toutefois, il importe de noter que le secteur de la santé publique n'apporte pas la solution à tous les problèmes de la pratique privée. Il offre plutôt au dentiste des défis différents. Il ne présente pas, non plus, le même attrait pour tous, même s'il couvre une vaste gamme d'activités.

L'Acte de l'Amérique du Nord britannique a confié au gouvernement fédéral la responsabilité d'assurer les services de santé à tous les Indiens et Inuit du Canada. Cette tâche incombe plus précisément à la Direction générale des services médicaux (Ministère de la santé et du bien-être) qui a son siège social à Ottawa.

À cette fin, la direction générale a divisé le pays en autant de régions administratives qu'il y a de provinces et de territoires, sauf dans l'est où les quatre provinces concernées ne forment qu'une région, celle de l'Atlantique. Chaque région a son propre bureau qui veille à l'administration des services dans son territoire.

Dans ce cadre, l'organisation des services dentaires se présente comme suit:

- le siège social, situé à Ottawa, embauche un conseiller dentaire qui est chargé d'élaborer un programme global de santé dentaire à l'intention des 320 000 Indiens et Inuit du pays et des autres segments de population vivant au nord du 60^e parallèle, et de veiller à sa mise en oeuvre (le titulaire joue un rôle important dans l'élaboration des politiques de la direction générale et dans la mise au point des lignes directrices et des objectifs du programme, en outre d'assurer la liaison avec les régions, les associations dentaires nationale et provinciales, les facultés de médecine dentaire et les organismes internationaux);

- chaque région embauche un dentiste régional (DE-3) qui est chargé d'administrer le programme, d'établir le budget et de planifier les services dentaires (pour illustrer l'importance du poste, notons que la province du Manitoba compte à elle seule quelque 40 000 Indiens répartis dans 59 réserves);

- chaque région est divisée en zones et embauche ordinairement autant de dentistes responsables de zone (DE-2) qui, en général, répartissent leur temps de façon égale entre les tâches administratives et la pratique en clinique, allant là où on a besoin de leurs services. Le responsable de zone peut, à son tour, embaucher des dentistes (DE-1) pour assurer le service en clinique dans les réserves. Ils peuvent être affectés à un hôpital mais, le plus souvent, ils sont appelés à voyager beaucoup et à se servir d'un équipement portatif pour prodiguer leurs soins. Les nouveaux diplômés préfèrent, de plus en plus, occuper ces postes par contrat, à temps plein ou partiel, plutôt que de se joindre à l'effectif de la fonction publique.

Comme elle couvre tous les aspects des services de santé, la direction générale offre aux personnes intéressées la possibilité d'oeuvrer dans des domaines autres que la dentisterie. Il y a par exemple, des dentistes qui occupent des postes supérieurs de l'administration et qui sont chargés de diriger, surveiller, coordonner ou autre des programmes de santé dans une perspective plus générale.

Sur le plan de la carrière, tout cela ne procure qu'un emploi. Par la suite, compte tenu de son esprit d'initiative et de ses champs d'intérêt, il appartient à chacun de saisir les occasions qui se présentent, qu'il s'agisse d'élaborer et de mettre en oeuvre des projets pilotes en matière de prévention, de mettre en valeur des moyens et des

techniques nouvelles et quoi encore dans ce domaine qu'on commence à peine à explorer.

Ordinairement, le dentiste régional doit administrer un budget qui dépasse le million de dollars et qui comprend, entre autres, la rémunération des dentistes de la pratique privée, les salaires, les frais de déplacement, l'achat d'équipement et de fourniture et, pour certains cas, l'adjudication de contrats à des dentistes, à des facultés de médecine dentaire ou à des organisations indiennes avec lesquelles il négocie la prestation des services.

L'administration fédérale offre d'ex-

cellents avantages marginaux que les estimateurs établissent à environ 13 p. cent du salaire. Outre les 11 jours de congé annuels, désignés et payés, les dentistes ont droit à trois semaines de vacances annuelles pendant les deux premières années de services, à quatre semaines par la suite, puis à cinq semaines après 22 années. Les fonctionnaires peuvent accumuler 1¼ journée de congé de maladie par mois et se bâtir une caisse de retraite dont la moitié est alimentée par l'employeur. Celui-ci assume également le coût des permis de pratique et la contribution à l'association.

Les postes offerts par le ministère dans le domaine dentaire sont ordinairement publiés dans le Journal. Les personnes désirant plus de renseignements peuvent cependant se faire guider vers la personne responsable en s'adressant à leur association provinciale ou en écrivant au:

Conseiller dentaire

Direction générale des services médicaux

Édifice Jeanne Mance, pièce 1970

Parc Tunney

Ottawa (Ontario) K1A 0L3

Ces informations ont été obtenues du Dr W.R. Bedford.

La retenue d'impôt sur les commissions

Outre les traitements et les salaires, l'employeur est tenu, depuis le 1^{er} janvier 1981, d'effectuer la retenue à la source sur les commissions qu'il verse à ses employés. En vertu de la Loi de l'impôt sur le revenu, l'employeur qui passe outre à cette obligation est passible d'une pénalité représentant 10 p. cent de la somme qu'il aurait dû retenir, d'une amende variant entre 200 \$ et 10 000 \$ et d'une peine allant jusqu'à six mois d'emprisonnement.

La nouvelle réglementation touche la profession, car il se peut que certains dentistes emploient d'autres dentistes ou d'autres personnes qu'ils rémunèrent sous forme de commissions sans faire la retenue à la source, alors qu'ils sont bel et bien des "employés" au sens de la loi. Malheureusement, celle-ci ne définit pas complètement les termes "commission" ou "employé"; par conséquent, il est souvent difficile d'établir, dans certains cas, la portée de nouvelle réglementation.

Revenu Canada n'examine pas moins minutieusement les conditions d'embauche qui peuvent établir une relation employeur-employé, alors que l'employeur ne fait pas de retenue à la source. Le présent article a pour objet de mettre la profession en garde contre ce piège et de porter à son attention les responsabilités qu'elle peut avoir en matière de fiscalité. En souli-

gnant les principaux éléments de la relation employeur-employé, il peut aussi aider les membres de la profession à établir si, de fait, la rémunération qu'il versent à leurs employés est une commission, ou les inciter à consulter un spécialiste de la fiscalité.

Lorsqu'on rémunère quelqu'un sous forme de commission, il faut préciser si le récipiendaire est un employé ou un contracteur indépendant. Quant à savoir si l'employé reçoit une commission ou pas, la question est secondaire car, à défaut de celle-ci, il reçoit vraisemblablement un salaire ou un traitement sur lequel l'impôt doit être retenu à la source.

La Loi de l'impôt sur le revenu définit "l'employé" comme une personne qui est au service d'une autre personne; ce qui implique que l'employé travaille sous la direction et sous la surveillance de l'autre personne.

C'est en appréciant la nature et l'importance de cette direction et de cette surveillance que les arbitres établissent s'il y a, essentiellement, relation employeur-employé. Voici donc un aperçu des principaux facteurs à considérer, quoiqu'il ne soit pas nécessaire qu'ils y soient tous pour tirer une conclusion ferme.

La surveillance: Moins une personne a de contrôle sur les éléments essentiels de sa pratique dentaire, tels les heurs et la régularité du travail, les

patients à voir, la charge et la nature du travail à faire, et plus cette personne fait l'objet de surveillance dans l'exercice de ses fonctions, plus elle est susceptible d'être considérée comme une employée.

Le risque financier et l'administration: En règle général, le bureau de l'impôt cherche à savoir qui prend le risque financier, qui est chargé de mousser les affaires et qui, aux yeux du public, est considéré comme le propriétaire du cabinet de pratique. Peut être considéré comme employé, quiconque travaille avec cette personne et est rémunéré en fonction de la production et du profit, mais sans partager les responsabilités mentionnées ci-dessus.

LA PARTICIPATION AUX AVANTAGES TOUCHANT LES EMPLOYÉS

La participation à une caisse de retraite, à un régime de partage différé des profits ou à un régime d'assurance-santé réservé aux employés, aux termes de la loi, laisse entendre que le participant est un employé.

Cet aperçu très général de la loi montre qu'il est apparemment très difficile d'établir avec certitude la relation employeur-employé aux fins de l'impôt. L'essentiel pour celui qui s'associe à d'autres dentistes et qui, en

Les Actualités

définitive, assume le risque et la responsabilité des décisions les plus importantes pour le cabinet de pratique, alors que les autres dentistes et le personnel ne font que dispenser des services dentaires, c'est d'analyser minutieusement avec son conseiller juridique et son conseiller fiscal la nature de l'association et d'établir si, de fait, il est un employeur auquel il incombe de faire la retenue à la source sur la rémunération versée aux associés et aux autres personnes.

Il importe de noter que, pour certains cas, Revenu Canada est disposé

à réduire ou à supprimer la somme à retenir à la source pour toute année d'imposition, si l'employé démontre qu'il a droit à d'importantes déductions d'impôt qui lui vaudront un remboursement équivalent à la somme qu'on prévoyait retenir.

Pour obtenir cette concession, l'employé doit présenter un état financier complet au Bureau de district de l'impôt qui examine le cas en comité.

Pour conclure, notons que la relation précise que le dentiste a, aux termes de la loi, avec ses collègues de travail peut avoir des effets concrets

sur ses impôts comme, d'ailleurs, sur d'autres questions juridiques. Ainsi, à titre d'employeur, le dentiste peut, selon les circonstances, être tenu responsable personnellement des actes de ses "employés", mais pas de ceux posés par un contracteur indépendant qui travaille avec lui. Il importe donc grandement d'examiner avec soin la véritable nature de la relation de travail aux fins de l'impôt; pour bien des cas, cela aidera aussi à apprécier d'autres questions importantes.

David McLean,

d'une étude d'avocats de Toronto

La Fédération dentaire internationale

George S. Beagrie DDS(Edin.)

Doyen, Faculté de médecine dentaire
Université de Colombie-Britannique
Vancouver (Colombie-Britannique)

Consultant, membre puis vice-président de la Commission de l'enseignement dentaire, le Dr Beagrie a aussi fait partie de 1976 à 1978 du comité de liaison de la FDI/AIRD. Il a été réélu récemment à la Commission de l'enseignement et de la pratique dentaires.

Comme les autres professions du pays, la profession de la médecine dentaire se regroupe en sociétés locales et en associations provinciales, puis en association nationale pour apporter à ses problèmes des solutions qui lui permettront de mieux servir la population. Elle fait de même à l'échelle mondiale par le truchement de la Fédération dentaire internationale (FDI).

Celle-ci a été fondée le 15 août 1900 par six dentistes qui étaient alors des chefs de file dans leur pays: Charles Godin (France), Florestan Aguilas (Espagne), George Cunningham (Angleterre), Elof Forberg (Suède), A.W. Harlan (États-Unis) et E. Sauvez (France). Ils ont posé le principe que sur le plan international la représentation de la profession se ferait sans distinction de nationalité. À ce moment-là, le principal souci portait, partout dans le monde, sur la formation et l'entraînement des dentistes. On comprend alors que les efforts des fondateurs portèrent d'abord sur la création d'une commission de l'enseignement pour examiner la question.

Une réputation qui n'est plus à faire

Depuis, la FDI est devenue l'organisation professionnelle internationale la plus représentative au monde et sa

réputation n'est plus à faire parmi les professions de la santé. À titre d'organisme politique mais non gouvernemental de la médecine dentaire, elle aide à orienter les principes directeurs de l'Organisation mondiale de la santé en la matière et collabore aux travaux d'autres organismes internationaux, telles l'Organisation internationale de normalisation et l'Association internationale de la recherche dentaire, qui lui sont affiliées. Elle exerce une influence sur les modes de prestation des services dentaires aux populations comme sur l'orientation de la recherche, la conception de l'équipement, les matériaux, l'ergonomie et une foule d'autres questions.

L'organisation

La FDI compte actuellement 81 pays membres, trois organisations régionales et trois secrétariats. Elle a aussi 11 membres affiliés, tels l'Association internationale de la recherche dentaire, l'Association internationale des étudiants dentaires et le Collège international des dentistes. Des délégués de 80 pays ont participé en 1980 à l'assemblée annuelle qui a eu lieu à Hambourg.

L'Assemblée générale est le corps législatif et l'organisme directeur de la fédération; elle est formée de délégués de toutes les associations membres ayant droit de vote. Entre les assemblées, l'administration est confiée à un conseil qui délègue les travaux à faire et est comptable à l'Assemblée générale.

Les commissions

C'est par ses commissions que la Fédération assure la continuité de ses travaux. La Commission de l'enseigne-

ment dentaire avait d'abord été créée pour mettre au point des normes et des programmes d'enseignement. Actuellement, l'organisme compte quatre commissions:

- la Commission de la recherche sur la santé buccale et en épidémiologie;
- la Commission de l'enseignement et de la pratique dentaires;
- la Commission des produits dentaires;
- la Commission des services dentaires des forces de défense.

Chaque commission répartit ses tâches entre des groupes de travail dont elle présente les rapports à l'Assemblée générale.

Les commissions ont besoin de consultants dont la nomination se fait par le truchement des associations nationales pour assurer la représentation des pays, compte tenu des divers champs d'intérêt personnels. Il importe au plus haut degré que les associations membres fassent ces propositions pour veiller à ce que la désignation des consultants convienne à leurs compétences et à ce que le consultant comprenne, à titre de représentant de son pays, la responsabilité que lui confie son association.

La Commission de la recherche sur la santé buccale et en épidémiologie compte 138 consultants, parmi lesquels trois seulement du Canada (ce n'est pas assez!). Les groupes de travail se répartissent ainsi:

1. les soins dentaires aux enfants d'âge pré-scolaire;
2. l'étude de la carie dentaire et des moyens de la prévenir et l'analyse "coût-avantage";
3. l'avancement de la santé buccale;
4. les anomalies dento-faciales;
5. la détérioration progressive de l'émail;
6. l'épidémiologie des maladies périodontales;
7. les maladies buccales causées par l'environnement;
8. l'implantation buccale.

La Commission de l'enseignement et de la pratique dentaires compte 115 consultants, parmi lesquels deux canadiens. Les groupes de travail se répartissent comme suit:

1. la transférabilité des permis;
2. la formation continue et surtout les moyens d'en évaluer l'efficacité;
3. la santé du dentiste;
4. les auxiliaires dentaires;
5. l'hygiène dans le cabinet de pratique;
6. la main-d'oeuvre et l'éducation dentaire en regard des besoins de la collectivité.

La Commission des produits dentaires examine les questions suivantes:

1. la vérification clinique des matériaux, des instruments et de l'équipement thérapeutique;
2. le matériel pharmaceutique utilisé en dentisterie;
3. les relations entre la profession et l'industrie dentaire;
4. les instruments prophylactiques, brosses à dents et autres;
5. la toxicité des matériaux.

La Commission des services dentaires des forces de dé-

fense se penche sur une grande variété de sujets concernant la santé dentaire dans les forces armées. Le brigadier-général W.R. Thompson en a présidé les travaux avec compétence pendant plusieurs années.

Les travaux des commissions sont tous ratifiés par l'Assemblée générale avant d'être mis à la disposition des associations. Un grand nombre de rapports ont ainsi été approuvés au cours des dernières années, entre autres les spécifications des unités dentaires, les méthodes de mordançage pour l'application des ciments de verre ionomérisé et les normes concernant les amalgames dentaires.

Le Journal dentaire international est l'organe officiel de la FDI et il mérite d'être conservé. Publié semestriellement, il couvre une grande variété de sujets et ses articles s'appuient sur une bibliographie excellente. Le rédacteur en chef du journal occupe un poste important dans l'organisation et est secondé par un comité et un conseil de publication. Outre le journal, la Fédération édite plusieurs publications importantes pour le monde de la médecine dentaire. Une d'elles, **Les sciences sociales et la dentisterie**, constitue un ouvrage de base sur le sujet; elle a soulevé l'intérêt envers les sciences du comportement, dont on avait tant besoin dans l'application des mesures de prévention et de contrôle des maladies dentaires.

Les programmes scientifiques de la FDI ont un caractère international et offrent un "échange d'idées" entre collègues de divers pays. À l'occasion de chaque assemblée, une exposition commerciale internationale offre aux participants l'occasion de connaître de nouvelles idées, de nouveaux matériaux et de nouveaux équipements.

Tout comme l'Association dentaire canadienne a besoin de l'engagement de ses membres pour présenter une voix forte au niveau national, la Fédération dentaire compte sur votre participation pour se faire bien entendre au niveau international.

La Fédération a besoin des dentistes canadiens

Quel que soit son rôle, aucune organisation n'est parfaite. Il est cependant plus facile de l'améliorer de l'intérieur, à titre de membre, que de la critiquer de l'extérieur. La FDI, un organisme international non gouvernemental, a besoin de la compétence des dentistes canadiens pour maintenir l'élan au fur et à mesure qu'elle avance dans l'amélioration des services dentaires offerts à l'humanité.

L'Organisme mondial de la santé a défini certains objectifs en matière de santé buccale pour l'an 2000. L'organisation de la médecine dentaire canadienne en a déjà atteint plusieurs et on a besoin du "savoir-faire" des dentistes canadiens pour aider les pays moins favorisés. La FDI est l'instrument qui permet de poursuivre les objectifs à l'échelle mondiale, mais il est essentiel qu'elle puisse compter sur ses membres.

Prix de mérite au Dr Thompson

Le nouveau président élu de l'Association dentaire canadienne le brigadier général W.R. Thompson, a reçu un prix de mérite de la Fédération dentaire internationale, le 6 septembre dernier, à Rio de Janeiro.

Il était l'un des deux seuls récipiendaires honorés par le président de la F.D.I., le professeur Louis Baume, lors de l'assemblée annuelle.

Président de la Commission des services dentaires des Forces armées de la F.D.I. de 1975 à 1980, le Dr Thompson a déclaré que le prix de

mérite "indique qu'est reconnu le développement progressif de la Commission des services dentaires des Forces armées au cours des dernières années. Celle-ci est devenue une division fortement et largement représentée."

Né à Campbellford en Ontario et diplômé de l'Université de Toronto en 1949, le Dr Thompson a reçu à la même université un certificat de chirurgie buccale en 1969.

Il a d'abord servi comme professeur à l'École des services dentaires des

Forces armées canadiennes, au camp Borden, de 1961 à 1965 et, actuellement, il occupe le poste de directeur général des Services dentaires.

En 1973, il a été fait membre du Collège international des dentistes et il a servi comme chirurgien dentaire honoraire de la Reine.

Le Dr Thompson a été également fait membre du Collège royal des dentistes de France et, en 1979, l'Ordre national des dentistes de France lui décernait la médaille Pierre Fouchard.

En 1980, il devenait membre du Conseil exécutif de l'A.D.C.

Le Congrès de Calgary

Lors du Congrès annuel de l'A.D.C. de 1981, Calgary a démontré que l'Ouest canadien réservait un accueil chaleureux à ses hôtes.

Environ 1 100 dentistes ont assisté aux conférences. Si l'on compte également les conjoints, les invités, les hygiénistes et les assistants dentaires, le nombre des participants s'élevait à environ 2 300.

De tous les coins du pays, des dentistes sont venus avec leur famille pour participer ensemble à divers événements sociaux, à un rodéo et à des déjeuners de style "chuckwagon."

Comme clou du programme scientifique, le Collège royal des dentistes du Canada a présenté un symposium sur la dentisterie pour les handicapés. On en trouvera des comptes rendus dans les pages de ce journal.

Présidé par le Dr Randy Headly, le congrès a été un immense succès. Plus de deux cents exposants y ont pris part, permettant aux dentistes de se mettre au fait des derniers progrès technologiques et des plus récents matériaux dentaires.

Le Dr C.R. Castaldi a été chargé de prononcer la conférence Grieve Me-



Le Dr Nick Mancini a présidé le congrès.
Dr. Nick Mancini presides at Convention

morial qui portait sur la responsabilité interprofessionnelle entre orthodontistes et praticiens généraux pour offrir aux adolescents les meilleurs soins dentaires possibles.

M. Ruben Nelson et le Dr Charles Sorenson ont traité des concepts touchant l'avenir et la gestion des pratiques dentaires.

Le Dr Ronald Jordan a fait part des idées actuelles sur la dentisterie res-

taurative. Le Dr Harry Gelfant a dirigé une conférence d'une journée sur les couronnes et les bridges. Le Dr Carl Hawrish a expliqué les derniers progrès accomplis en endodontie chirurgicale.

Lors du déjeûner d'investiture, le Dr Gilbert Utas a remis la chaîne présidentielle au Dr Donald E. Williams de Moncton (Nouveau-Brunswick).

Le prix du Fonds canadien de recherche dentaire a été accordé au Dr J.L. Berger pour son article intitulé: "A Study to Investigate the Effect of Two Different Ligation Systems on Tooth Movement in Macaca Cynomolgous."

Mme Edith Schmidt, des C.D.S.P.I. et le Dr Robert Gray, de l'Alberta, ont reçu des prix pour service éminent.

Les Drs George M. Dewis et Philip S. Christie ont été reçus membres honoraires de l'Association.

Conjoints et invités ont participé à des excursions qui les ont conduits à Spruce Meadows, au zoo de Calgary, au jardin des dinosaures, au planétarium, au musée de l'espace, au centre récréatif Paskapoo, à la tour de Calgary et au parc Heritage.

Bureau des gouverneurs

Les décisions du Bureau des gouverneurs

Hubert Drouin, Directeur général

Le Bureau des gouverneurs de l'ADC a tenu sa réunion annuelle les 27 et 28 août à Calgary (Alberta), à l'occasion du congrès annuel de l'Association, auquel ont participé quelque 1 100 dentistes venus de tous les coins du pays. Le Bureau, qui compte 24 membres et est présidé par le Dr Nick Mancini, de Hamilton, est l'organisme directeur de l'Association. Il s'est réuni pour élire de nouveaux directeurs, nommer les vérificateurs et voir aux affaires ordinaires de l'Association. Voici un aperçu des résolutions qu'il a prises et des gestes qu'il a posés au cours des deux jours de délibérations.

ÉTUDE SUR LA MAIN-D'OEUVRE

La firme R.K. House and Associates a été autorisée à mener une étude de 35 000 \$ sur la main-d'oeuvre. Elle doit présenter un rapport final au mois de septembre 1982.

Les travaux ont pour objet d'examiner la situation de la main-d'oeuvre dentaire dans toutes les provinces canadiennes et d'établir dans quelle mesure il y a surabondance d'effectif. L'étude éclairera l'ADC et les associations provinciales dans leurs orientations.

CAISSE DE RETRAITE

L'ADC invitera l'Institut des comptables agréés du Canada, le Barreau canadien et l'Association médicale canadienne à former un comité multidisciplinaire pour examiner les moyens d'améliorer le régime fiscal en ce qui a trait à la contribution à une caisse de retraite des personnes qui travaillent pour leur propre compte.

AMÉLIORATION DES RÉGIMES D'ASSURANCE

Le Bureau a approuvé les modifications suivantes au régime d'assurance des dentistes canadiens:



Dr Gilbert Utas et les gouverneurs

- a) Assurance-vie de base —
primes réduites de 10 p. cent
protection accrue de 10 p. cent
- b) L'option coût de la vie pour l'assurance invalidité prolongée sera haussé à 4 000 \$ avec inscription libre. La date limite d'adhésion est le 31 octobre 1981, en vigueur le 1^{er} janvier 1982.
- c) Assurance des frais généraux, maximum porté à 6 000 \$, avec inscription libre. La date limite d'adhésion est le 31 octobre 1981, en vigueur le 1^{er} janvier 1982.
- d) Révision de l'assurance sans frais pour les nouveaux diplômés.



LA SECTION DES SPECIALISTES

Ont participé à la réunion de la section des spécialistes, de gauche à droite, debout: le Dr G. Maranda; le Dr J. Gryfe; la directrice de l'éducation à l'ADC, Linda Teteruck; les Drs D.V. Chaytor, A.K. Elgeneidy, F.B. Burns, I.C. Bennett et le directeur de l'agrément à l'ADC, le Dr Vic Chatwin. Assis: Hubert Drouin, directeur général de l'ADC; le brig.-gén. W.R. Thompson, président élu; le Dr Gilbert Utas, président sortant; le Dr John Stamm; le Dr Donald Williams, président; le Dr Clyde Covit.

SPECIALTY SECTIONS

Those attending the Specialty Sections meeting were, from left to right in the back row, Dr. G. Maranda; Dr. J. Gryfe; CDA Director of Education Linda Teteruck; Dr. D.V. Chaytor; Dr. A.K. Elgeneidy; Dr. F.B. Burns; Dr. I.C. Bennett; CDA Director of Accreditation, Dr. Vic Chatwin; front row is Hubert Drouin, Executive Director of CDA; CDA President-elect Brig.-Gen. W.R. Thompson; immediate past president, Dr. Gilbert Utas; Dr. John Stamm; President Dr. Donald Williams; and Dr. Clyde Covit.

Les Actualités

DENTISTES SALARIÉS

Un comité spécial sera formé pour examiner les modalités d'adhésion des dentistes salariés. Le Bureau répondait ainsi à une demande de l'Association des dentistes du gouvernement de la Saskatchewan.

L'ASSOCIATION DES HYGIÉNISTES DENTAIRES

Le Bureau a demandé à cette association de préciser sa pensée en ce qui a trait à la pratique privée des hygiénistes au Canada. Il réagissait ainsi à plusieurs déclarations faites depuis un an et demi par ses dirigeants et au mémoire qu'ils ont présenté en 1979 à la Commission Hall.

LE CONSEIL DES MATÉRIAUX ET APPAREILS DENTAIRES

Le Bureau a décidé de maintenir la participation aux travaux du comité technique de la dentisterie de l'Association canadienne de normalisation et d'augmenter sa contribution de 3 600 \$ à 12 000 \$ pour l'exercice 1981-1982, tout en demandant à l'Acnor de lui faire rapport de l'état des travaux avant de lui faire d'autres versement. Cette mesure a pour objet d'aider à la mise au point d'un programme de vérification et d'approbation des produits dentaires.

DISTINCTION DU FRCD

Le Fonds canadien de la recherche dentaire a décerné une distinction au Dr J.L. Berger, de l'Université de Toronto, pour son étude intitulée *A Study to Investigate the Effect of Two Different Ligation Systems on Tooth Movement in Macaca Cynomolgus*. Le doyen Ten Cate a accepté la trophée au nom de l'université.

AUTRES DISTINCTIONS

Membres honoraires: C'est la plus haute distinction que l'Association décerne pour services exceptionnels dans tous les domaines de la médecine dentaire sur le plan national ou international. Les récipiendaires de 1981 furent les Drs George M. Dewis et

Philip S. Christie, tous deux de la Nouvelle-Écosse.

Pour services remarquables: Ce trophée est décerné à ceux et celles qui ont rendu des services remarquables à l'Association. Les récipiendaires de 1981 furent Mme Edith Schmidt (ex-gérante du CDSPI) et le Dr Robert A. Gray, de l'Alberta.

LES COMITÉS

Sur recommandation des conseils concernés, le Bureau a approuvé la création des comités suivants:

- a) Comité de la formation continue (Conseil de l'éducation) Mandat:
 - i) examiner le rôle de l'ADC en matière de formation continue et faire les recommandations appropriées au conseil;
 - ii) aider le conseil dans l'application de ces recommandations;
 - iii) faire les études et prendre toute initiative qu'il jugera nécessaires et que le conseil approuvera pour aider l'ADC à définir et à assumer ses responsabilités en matière de formation continue.
- b) Comité des services dentaires (Conseil des services de santé) Mandat:
 - examiner, apprécier et rendre disponible l'information en matière de planification, d'administration, de prestation et de financement des services dentaires.

LE PROTOCOLE DU CONGRÈS

Le Bureau a approuvé un nouveau protocole pour la tenue du congrès. Il entrera en vigueur pour l'organisation du congrès de 1983 qui aura lieu à Vancouver, sous la présidence du Dr T.E. Ramage.

Voici la liste des prochains congrès.

Année	Endroit	Présidence
1982	Toronto	Dr. G. Sterling (conjointement avec l'ODA)
1983	Vancouver	Dr. T.E. Ramage
1984	Montréal	à désigner
1985	Ottawa	à désigner

CONSEIL DE L'ÉDUCATION

Sur recommandation de ce conseil, le Bureau a approuvé l'agrément des programmes d'enseignement distincts présentés par des institutions offrant déjà un programme agréé d'études d'assistance dentaire.

Il a aussi approuvé les nouvelles catégories d'agrément qui se répartissent comme suit:

- agrément entier;
- agrément conditionnel;
- agrément provisoire;
- agrément préliminaire.

On peut obtenir plus de précision sur ces catégories en s'adressant à l'Association dentaire canadienne.

Le Bureau a aussi donné son agrément entier aux institutions suivantes:

- l'Université de la Colombie-Britannique, programme de spécialisation en périodontie;
- l'Université du Manitoba, programme universitaire en orthodontie;
- le *Wascana Institute*, hygiène dentaire;
- le *Seneca College*, hygiène dentaire et assistance dentaire;
- l'*Okanaga College*, assistance dentaire;
- le Collège Algonquin, assistance dentaire (programmes français et anglais).

CONSEIL DES SERVICES D'INFORMATION

Le Bureau a accepté la recommandation du conseil d'organiser un atelier sur les médias d'information pour aider les dirigeants d'association, les porte-paroles et les chefs de file dans leurs rapports avec les représentants des médias. On en profitera pour évaluer l'efficacité de ce genre d'atelier et examiner la possibilité d'en appliquer la formule à la formation des membres de l'Association.

LE CONSEIL EXÉCUTIF (1981-1982)

Le Bureau a le plaisir d'annoncer comme suit la composition du Con-

seil exécutif pour l'exercice 1981-1982:

le Dr D.E. Williams, président (Nouveau-Brunswick);

le Dr G.E. Utas, président sortant (Alberta);

le brigadier-général W.T. Thompson, président élu (Ontario);

le Dr D.L. Thompson, de l'Alberta;

le Dr R.N. Hicks, de la Colombie-Britannique;

le Dr P.R. Crawford, du Manitoba (provinces des Prairies);

le Dr R.D. Sexton, de Terre-Neuve (provinces de l'Atlantique);

le Dr. B.W. Holmes, de l'Ontario;

le Dr J. Laporte, du Québec.

seil a tenu sa première réunion à Halifax, à l'occasion du congrès des étudiants en médecine dentaire du Canada, qui a été présidé par Peter Judd.

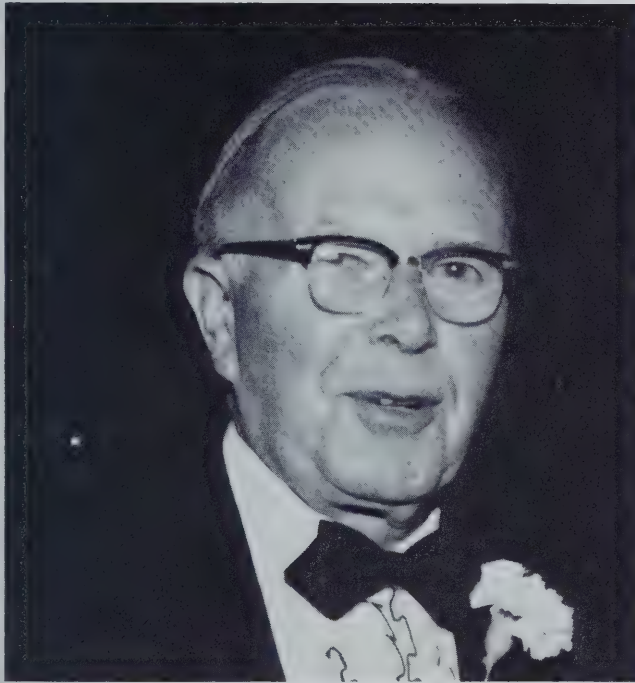
LE FCED

Le Dr James A. Guest, président du conseil d'administration du Fonds canadien pour l'enseignement dentaire, a annoncé que le Fonds déménagera ses bureaux à Ottawa au plus tard le 30 juin 1982.

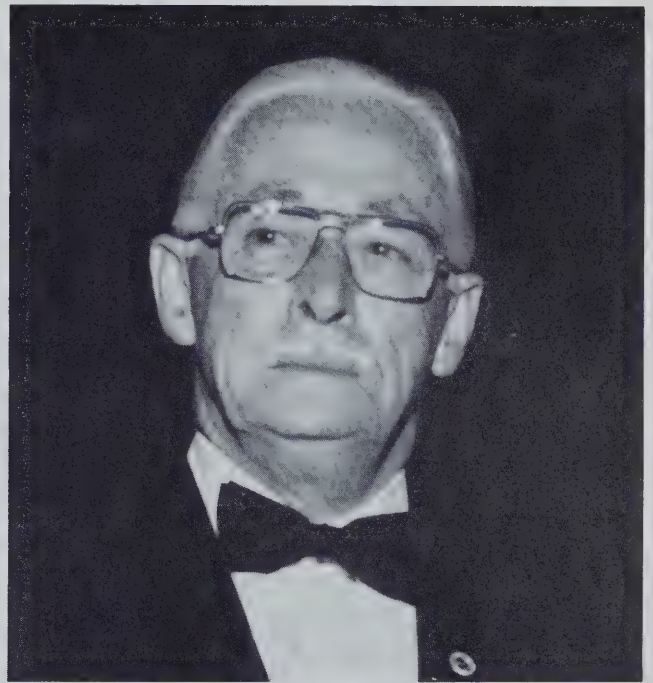
AFFAIRES ÉTUDIANTES

Le Bureau a autorisé le Conseil des affaires étudiantes à se réorganiser, afin d'avoir une représentation plus équitable des étudiants des diverses facultés de médecine dentaire. Le con-

Nouveaux membres honoraires de l'ADC



Dr George Dewis



Dr Philip Christie

Les Drs George M. Dewis, Philip S. Christie et R.A. Gray ont été faits membres honoraires de l'Association dentaire canadienne, lors du congrès annuel qui a eu lieu en septembre à Calgary.

C'est la plus haute distinction honorifique que l'Association décerne "pour services exceptionnels dans tous les domaines de la médecine den-

taire, sur le plan national ou international".

Le Dr Dewis, de Halifax, est originaire de Boston et a obtenu son diplôme en 1928 de l'Université Dalhousie où il a été membre de la Faculté de dentisterie pendant 37 ans. Il a été nommé conférencier en 1940, professeur assistant en 1946, professeur associé en 1950 et professeur en 1952.

Il a été président de l'ADC en 1958-1959, membre du Bureau des gouverneurs de 1950 à 1960, puis trésorier de 1960 à 1970.

Le Dr Dewis a également été secrétaire-régistrare du Provincial Dental Board of Nova Scotia de 1941 à 1968 et membre de la Halifax County Dental Society et de la Nova Scotia Dental Association.

Le nouveau président de l'ADC



Dr Donald Williams

Le nouveau président de l'Association dentaire canadienne est le Dr Donald Williams, de Moncton

(N.-B.). Il succède au Dr Gilbert Utas, de Grande Prairie (Alberta).

Le nouveau président élu est le brigadier-général W.R. Thompson, d'Ottawa.

Le Dr Williams est originaire de Saint-Jean (N.-B.) et a obtenu son diplôme de l'Université Dalhousie en 1955. Il a servi dans le Corps dentaire royal canadien de 1955 à 1958 et pratique, depuis, à Moncton.

Il a été membre actif de plusieurs associations dentaires, notamment la Société dentaire de Moncton dont il a été président pendant un an et secrétaire-trésorier pendant quatre ans.

Il a siégé au conseil de la Soci-

été dentaire du Nouveau-Brunswick pendant six ans et a présidé son comité exécutif pendant trois ans. Il a représenté cette société au Bureau des gouverneurs de l'ADC pendant quatre ans et a siégé au conseil exécutif de l'organisme national pendant deux ans.

Le Dr Williams a également fait partie de plusieurs conseils: déontologie, matériaux et appareils dentaires, services hospitaliers et formation.

Il est membre de l'Académie de médecine dentaire, de l'Académie Pierre Fauchard et de la Fédération dentaire internationale.

Le président élu de l'ADC

Le brigadier-général W.R. Thompson a été fait président élu de l'ADC en septembre à Calgary, lors du congrès annuel de l'association.

Originaire de Campbellford (Ontario), le Dr Thompson a fait ses études à l'Université de Toronto. Il y a obtenu son diplôme en 1949, puis son certificat en chirurgie buccale en 1969.

Récemment, le Dr Thompson était fait commandeur de l'Ordre du mérite militaire en reconnaissance de ses états de service et de son dévouement dans les forces canadiennes.

Il a servi dans l'armée canadienne au Canada et outre-mer à titre de dentiste, de spécialiste de la chirurgie buccale, d'instructeur en clinique et d'administrateur dentaire.

De 1961 à 1965, le Dr Thompson a été instructeur à l'Ecole des services dentaires des Forces canadiennes au Camp Borden.

Il a été fait fellow du Collège international des dentistes en 1973 et chirurgien dentaire honoraire de la Reine.

De 1975 à 1980, le Dr Thompson a présidé la Commission des services dentaires des forces de défense à la Fédération dentaire internationale. Il est devenu membre du Bureau des gouverneurs de l'ADC en 1976.

Il est fellow du Collège royal des dentistes et a reçu en 1979 la médaille Pierre Fauchard de l'Ordre national des dentistes de France.

Il siège au conseil exécutif de l'ADC depuis 1980 et est actuellement directeur général des Services dentaires des Forces canadiennes.

Le Dr Thompson est marié et a trois enfants.



Brig.-Gen. W.R. Thompson

Élections chez les orthodontistes

Les associations des orthodontistes du Québec et de l'Ontario ont élu récemment leur exécutif respectif pour l'exercice 1981-1982.

Au Québec, le nouvel exécutif comprend: René Bourcier, président; Oleg Kopytov, président élu; Sheldon Dorfam, 1^{er} vice-président; Michel Brousseau, 2^e vice-président; Made-

leine de Grandmont, secrétaire; Erich Reich, trésorier; Morris Wechsler, archiviste; André Gravel, directeur; Stephen Miller, président sortant.

En Ontario, l'exécutif comprend: Brian Smith, président; Raymond Bozek, président sortant; Howard Tile, vice-président; Malcolm Yasny, secrétaire-trésorier.

Demain: un désordre empreint d'espoir (Nelson)

Un monde désordonné, débraillé, mais vraiment chargé d'espoir.

C'est ainsi que le futurologue Ruben Nelson, président de Square One Management Ltd., firme spécialisée dans la prospective, a résumé sa vision de l'avenir devant les membres de l'Association dentaire canadienne réunis en congrès à Calgary.

Pour en saisir le sens, il faut, à son avis, voir le temps d'une certaine façon: la société évolue lentement au rythme du temps pris au sens hébraïque du mot, c'est-à-dire que, tout en nous occupant du moment présent, en route vers l'avenir, nous vivons dans le passé.

Face à la "grande génération"

Il a précisé qu'il se produisait aujourd'hui un certain nombre d'événements de portée durable, que vous devriez être prêts à prendre en main.

Il parlait alors de la "grande génération" qui a vu le jour entre 1952 et 1965 et qui, prévoit-il, ne cadrera plus en 1991 dans nos institutions traditionnelles, dominées par des hommes d'âge moyen. Ce phénomène engendrera des pressions sociales.

Cette génération se distingue de plusieurs façons: par ses études qui, pour la première fois, atteignent ou dépassent le niveau secondaire; par son caractère, pour la première fois, vraiment urbain; par sa mobilité; par son goût de l'expérience et de la sensation; par son aliénation; par la déssexualisation des fonctions; par son non-conformisme religieux, son insoumission et sa grande tolérance.

"Aucune province n'a encore de politique adaptée à ce groupe de population", de dire M. Nelson.

À titre d'exemple, le futurologue croit qu'en Alberta, le problème de la "grande génération" prendra bien-

tôt des proportions démesurées et que la province devrait tenter de le résoudre en favorisant le développement de la micro-informatique qui aidera à multiplier les emplois et à réduire la demande en ce sens. En Ontario, par contre, il suggère que la province encourage cette génération à aller vivre ailleurs pour alléger ses problèmes sociaux.

En matière de micro-informatique, M. Nelson croit qu'il y a un manque de compréhension.

"On commence à se rendre compte que l'ordinateur n'ordonne pas", dit-il. On s'en est servi pendant une décennie pour accélérer les opérations dans des domaines connus, mais on sait aujourd'hui qu'il permet de traiter l'information. En 1983, il sera plus économique de la transmettre numériquement que par la poste.

À cause de cette haute technologie, il y aura de moins en moins d'emploi pour le personnel peu compétent.

Le foisonnement des réseaux d'information est un autre élément de la vision que M. Nelson se fait de l'avenir. Il permettra par exemple à chacun, une fois la source connue, de s'adresser directement à la personne concernée, sans égard à son rang, pour obtenir l'information dont il a besoin.

"Nous n'avons pas prévu ce mode de communication dans nos organisations, dit-il. Au contraire, nous l'avons exclu: les présidents s'adressent aux présidents."

Dans cet optique, il n'y aura plus d'échelons ni de hiérarchie. On s'achemine déjà vers l'intégralité des réseaux, en ce sens que l'information contenue dans le tout est aussi entière dans ses parties.

"Ainsi en est-il déjà dans nos bonnes familles, mais pas dans nos organisations", dit-il.

Le conférencier prévoit que, dans les années 80, l'économie se détériore-

ra comme jamais auparavant parce que "notre façon de faire évolue plus vite que nos principes".

"Et sans principes nouveaux, nous sommes comme des aveugles s'agitant dans le noir", dit-il.

Des services à meilleur compte

Dans les années 80, il nous faudra comprendre que l'argent ne coulera plus à flot et que nous devrons trouver les moyens de donner les services à meilleur compte.

"L'avenir ne se présentera pas comme dans le passé. Il ne faut pas penser qu'il répondra à nos attentes", dit-il.

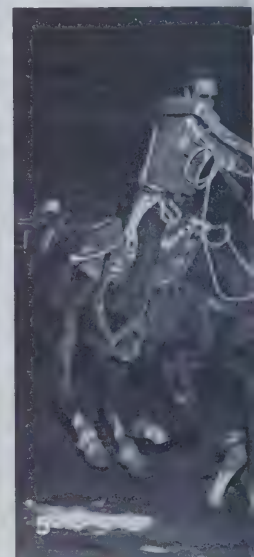
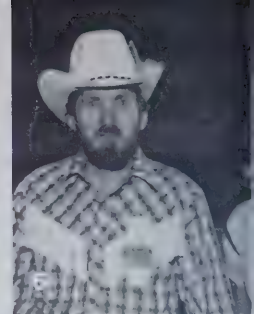
Nous sommes la première génération à connaître des changements aussi profonds depuis 800 ans.

Nous nous engageons dans une ère nouvelle, face à laquelle personne ne sait que faire. Et ceux qui s'attendent à une période d'incohérence au cours de la prochaine décennie s'en tireront le mieux. Il faut accepter la tension de l'incertitude, celle qui fait dire: "Je ne suis pas certain de savoir ce que je fais". De ce qu'il appelle le "doute opérationnel", s'ensuivra une "confiance cosmique".

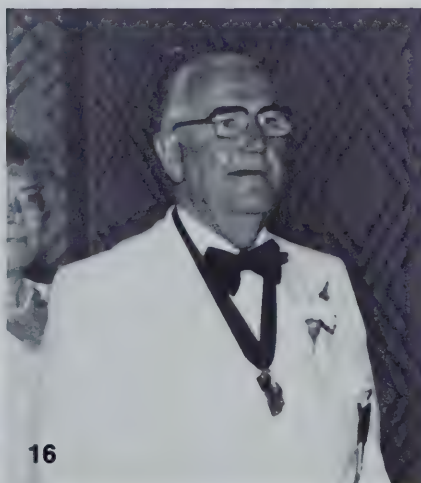
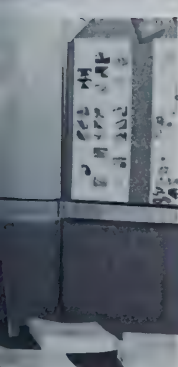
En ce qui concerne l'administration publique, il faut prendre conscience qu'il est "fondamentalement démoralisant" de penser que nous ne pouvons pas nous gouverner nous-mêmes et que nous en confions la responsabilité à d'autres personnes qui semblent "plus aptes à le faire."

Il nous faut avancer vers un système qui tiendra compte de l'interdépendance des responsabilités personnelles.

"Je suis un pessimiste joyeux" conclut-il.



1. Dr. Luc Dugal, Dr. Gilbert Utas, Fred Heaps, past-president of the Dental Industry Association of Canada and vice-president of Dentsply Canada, Dr. Donald Williams and Dr. Randy Headley, open exhibits
2. Dr. Gilbert Utas charges through the gates to open rodeo
3. Brig.-Gen. W.R. Thompson and his wife enjoy a Western breakfast
4. Kathy Mactaggart at the CDA booth
5. Steer roping was fast and furious event at rodeo night
6. Drs. E. Derrett, D. Birdsell, R. Boyar, M. Pernarowski: winning Manitoba rodeo team
7. Drs. Jack Harris, Bruce Jackson and Brad Holmes at ODA booth
8. Dr. Donald Williams gives Mrs. Olive Utas a big kiss after presenting her with a gift
9. Dr. Gilbert Utas proudly displays a portrait done by Dr. L.G. Mandi
10. Dr. J.G. Landry and his wife enjoy a chuckwagon breakfast
11. A group of dentists joined in the rodeo fun
12. Everyone ate up a storm at chuckwagon breakfast
13. Dr. John MacKay of Saskatchewan and Dr. Phil Greeves dig into breakfast
14. The head table is piped in
15. Dr. Randy Headley, his wife Germaine and Dr. John Christie savor beef at the rodeo
16. Prof. C.H. Tonge, representing the British Dental Association
17. Dr. K.A. Ready, president of the Canadian Pharmaceutical Association
18. Dr. D.L. Thompson and Dr. R.N. Hicks at head table



l'ouverture de l'exposition, le Dr Luc Dugal, le Dr Gilbert Utas, M. Fred
aps, président sortant de l'Association de l'industrie dentaire et vice-
sident de Dentsply Canada, le Dr Donald Williams et le Dr Randy Headley.
Dr Gilbert Utas inaugure le rodéo au galop.
brigadier-général W.R. Thompson et son épouse apprécient le charme d'une
rée western.
thy Mactaggart au kiosque de l'ADC.
capture du taureau, un art du rodéo qui demande beaucoup de rapidité et de
ueur.
s E. Derrett, D. Birdsell, R. Boyar, M. Pernarowski: gagnant de l'équipe
éo du Manitoba.
Mrs Jack Harris, Bruce Jackson et Brad Holmes au kiosque de l'ODA.
Dr Donald Williams donne une grosse bise à M^{me} Olive Utas après lui avoir

remis un présent.
9. Le Dr Gilbert Utas exhibe fièrement un portrait fait par le Dr L.G. Mandin.
10. Le Dr J.-G. Landry et son épouse apprécient le petit déjeuner «chuckwagon».
11. Un groupe de dentistes s'en donne à coeur joie au rodéo.
12. Ce fut la grande bouffe au petit déjeuner «chuckwagon».
13. Le Dr John MacKay, de la Saskatchewan, et le Dr Phil Greeves, deux bonnes
fourchettes au petit déjeuner.
14. La table d'honneur fait son entrée au son de la cornemuse.
15. Le Dr Randy Headley, son épouse, Germaine, et le Dr John Christie, savourèrent
le boeuf de l'Alberta, au rodéo.
16. Le professeur C.H. Tonge, représente l'Association Dentaire Britannique.
17. Dr K.A. Ready, président de l'Association Pharmaceutique Canadienne.
18. Dr D.L. Thompson et Dr R.N. Hicks à la table d'honneur.

Convention



CONVENTION ORGANIZERS: Front row, left to right — Judy Jones, Gwen Braunberger, Sylvia Gerald, Germaine Headley, Randy Headley, Leona Percival, Jack Derbyshire. Second row: Brian Weeks, Linda Dugal, Lee Misura, Mike Gerald, Nick Misura, Doris Greeves, Gerry Braunberger. Third row: Luc Dugal, Fern Jones, Phil Greeves. Missing: Richard Odland, Rick Valentini, Paul Chapman.

Western hospitality was at its best in Calgary for the 1981 CDA Annual Meeting.

Approximately 1,100 dentists attended the sessions, and combined with spouses, guests, dental assistants and hygienists, attendees numbered about 2,300.

Chuckwagon breakfasts, a rodeo and numerous other social events brought together dentists and their families from all parts of the country.

The Royal College of Dentists of Canada symposium on dentistry for the disabled was a highlight of the scientific program and papers from the symposium were included in the October issue of the Journal.

Under the chairmanship of Dr. Randy Headley, the convention was

a huge success. More than 200 exhibitors were present to allow dentists to examine the latest in technology and materials.

The Grieve Memorial Lecture was delivered by Dr. C.R. Castaldi and dealt with Interprofessional Responsibility between Orthodontist and General Dentist in Optimizing Dental Care for the Adolescent.

Ruben Nelson and Dr. Charles Sorenson dealt with concepts for the future and dental practice management.

Dr. Ronald Jordan spoke on current concepts in restorative dentistry; Dr. Harry Gelfant conducted a one-day lecture on crown and bridge; and Dr. Carl Hawrish discussed the latest developments in surgical endodontics.

At the installation luncheon, Dr.

Gilbert Utas turned over the chain of office to Dr. Donald E. Williams of Moncton, New Brunswick.

The CDRF Award was presented to Dr. J.L. Berger of Windsor for his research on the effect of two different ligation systems on tooth movement in Macaca Cynomolgus.

Distinguished service awards were presented to Mrs. Edith Schmidt and Dr. Robert Gray of Alberta.

Drs. George M. Dewis and Philip S. Christie received honorary membership in the association.

Spouses and guests were treated to sightseeing tours and visits to Spruce Meadows, the Calgary Zoo and Dinosaur Park, the Planetarium and Aero Space Museum, Paskapoo Recreation Area, the Calgary Tower and Heritage Park.

Board of Governors

Decisions of the CDA Board of Governors

Hubert Drouin, Executive Director

The annual meeting of the CDA Board of Governors was held in Calgary, Alberta August 27-28 in conjunction with the Annual Convention which was attended by approximately 1,100 dentists from across Canada. The 24-member Board, chaired by Dr. Nick Mancini of Hamilton is the governing body of the Association. It met to elect a new slate of officers, appoint the auditors and to consider the regular business of the Association. The following are highlights of the resolutions and actions taken during its two days of deliberations:

MANPOWER STUDY

R.K. House and Associates was authorized to proceed with a manpower study at a cost of \$35,000 and to prepare its final report for September, 1982.

The research proposal is designed to examine dental manpower in Canada by province in order to identify the critical over-supply situation. The study is intended to help CDA and the provincial associations clarify policy action.

RETIREMENT INCOME PROVISION

The CDA will invite the Canadian Institute of Chartered Accountants, the Canadian Bar Association and the Canadian Medical Association to participate in a multi-professional committee to study methods of improving tax rules related to pension contributions by self-employed persons.

INSURANCE PLANS IMPROVED

The Board approved the following changes to the Canadian Dentists Insurance Plan effective January 1, 1982

- (a) Basic Life — premiums reduced by 10 per cent
coverage increased

by 10 per cent
— maximum coverage \$370,000.

- (b) Increase in the LTD Program to a maximum of \$4,000 with open enrolment in October. A COLA clause for LTD will be offered at the same time.
- (c) Increase in Office Overhead to a maximum of \$6,000 with open enrolment, deadline October 31, 1981.
- (d) Revised graduate No Cost Insurance package

SALARIED DENTISTS

An ad hoc committee will be formed to investigate the membership status of salaried dentists. The action was approved by the Board in response to a submission from the Association of Government Dentists of Saskatchewan.

COUNCIL ON DENTAL MATERIALS AND DEVICES

The Board approved continued support of the Canadian Standards Association Technical Committee on Dentistry and increased CDA's commitment from \$3,600 annually to \$12,000 for 1981-82 and requested that a status report be prepared by the CSA prior to further funding. This funding is intended to assist in the development of a program to test and certify dental products.

CDRF AWARD

The Canadian Dental Research Foundation Award for 1981 was presented to Dr. J.L. Berger of the University of Toronto for his paper "A Study to Investigate the Effect of Two Different Ligation Systems on Tooth Movement in Macaca Cynomolgus". A trophy was accepted on behalf of the University of Toronto by Dean Ten Cate.

AWARDS:

Honorary Membership: This is the Association's highest award and is conferred on persons deemed to have rendered exceptional constructive services nationally and/or internationally in any field of dentistry. The following were the 1981 recipients:

Dr. George M. Dewis, Nova Scotia

Dr. Philip S. Christie, Nova Scotia

Distinguished Service Award: This award is conferred on those who have rendered outstanding service to the Association, and the following were recipients for 1981:

Mrs. Edith Schmidt (former

Business Manager, CDSPI)

Dr. Robert A. Gray, Alberta

COMMITTEES

The Board, upon the recommendation from Councils approved the following committees:

- (a) Council on Education-Continuing Education Committee Terms of Reference

- (i) to consider the roles of the CDA in continuing education and to make recommendations to Council on matters pertaining to those roles

- (ii) to assist Council in implementing such recommendations

- (iii) to undertake such studies, programs and projects as it may deem necessary, and as may be approved by Council in order to assist the CDA in determining and fulfilling its roles in continuing education.

- (b) Council on Health Care-Dental Care Systems Terms of Reference

— to study, evaluate and make available information on the

Board of Governors

planning, administration, delivery and funding of dental care systems

CDA CONVENTION PROTOCOL

A new convention protocol was approved to be effective for the planning of the 1983 Convention in Vancouver under the Chairmanship of Dr. T.E. Ramage.

Future conventions are as follows:

Year	Location	Chairman
1982	Toronto	Dr. G. Sterling (CDA/ODA jointly)
1983	Vancouver	Dr. T.E. Ramage
1984	Montreal	To be named
1985	Ottawa	To be named

COUNCIL ON EDUCATION

The Board approved the recommendation from the Council on Education that applications for accreditation of independent study programs be approved from institutions having approved dental assisting programs.

New classifications of accreditation

status were approved. These are as follows:

- Full Approval
- Conditional Approval
- Provisional Approval
- Preliminary Approval

Full details of the above approval status is available by contacting the Canadian Dental Association.

The Board also approved the granting of full accreditation status to:

University of British Columbia,
Postgraduate Program in
Periodontics

University of Manitoba,
Graduate Program in
Orthodontics

Wascana Institute, Dental Hygiene
Seneca College, Dental Hygiene
& Dental Assisting

Holland College, Dental Assisting
Vancouver Vocational Institute,
Dental Assisting

College of New Caledonia,
Dental Assisting

Okanaga College, Dental Assisting
Algonquin College,
Dental Assisting
(French & English Programs)

COUNCIL ON INFORMATION SERVICES

The Board approved the recommendation by the Council to develop a media workshop format to assist association officers, spokesmen and other opinion leaders in dealings with the media. The effectiveness of this type of workshop will be evaluated and if deemed effective, may be offered as a training module to members of the Association.

EXECUTIVE COUNCIL — 1981/82

The Board is pleased to name the 1981/82 Executive Council as follows:

- Dr. D.E. Williams — President,
CDA - New Brunswick
- Dr. G.E. Utas — Past-President,
CDA — Alberta
- Brig.-Gen. W.R. Thompson —
President-Elect, CDA — Ontario
- Dr. D.L. Thompson — Alberta
- Dr. R.N. Hicks — British
Columbia
- Dr. P.R. Crawford — Manitoba
(Prairie Provinces)
- Dr. R.D. Sexton — Newfoundland
(Atlantic Provinces)
- Dr. B.W. Holmes — Ontario
- Dr. J. Laporte — Quebec

Dr. J.L. Berger wins CDRF Award



Dr. J.L. Berger, left, accepts the Canadian Dental Research Foundation Award for 1981, and Dr. A.R. Ten Cate, dean of the Faculty of Dentistry at the University of Toronto holds the university award. Dr. Berger's winning paper was entitled "A Study to Investigate the Effect of Two Different Ligation Systems on Tooth Movement in Macaca Cynomologous."

STUDENT AFFAIRS

The Board accepted the restructuring of the Council on Student Affairs as recommended by that Council. This change was precipitated in an effort to provide more equitable representation by students from each dental faculty. The first meeting of the Council was held in Halifax during the Canadian Dental Students' Conference, under the chairmanship of Peter Judd.

CFDE

Dr. James A. Guest, Chairman, CFDE Board of Trustees announced that the CFDE office will be moved to Ottawa no later than June 30, 1982.

Board of Governors

Dr. Donald Williams elected president

Dr. Donald Williams of Moncton, N.B. is the new president of the Canadian Dental Association.

Dr. Williams succeeds Dr. Gilbert Utas of Grande Prairie, Alberta. The new president-elect is Brig.-Gen W.R. Thompson of Ottawa.

Dr. Williams was born in Saint John, N.B. and graduated from Dalhousie University in 1955. He served with the Royal Canadian Dental Corps from 1955-58 and has practised in Moncton ever since.

He has been active in many dental associations, and was secretary-treasurer of the Moncton Dental Society for four years, and president for one year.

For six years he was a council member on the New Brunswick Dental Society and was executive council chairman for three years.

He represented the New Brunswick



Newly elected CDA President, Dr. Donald Williams is shown being congratulated by past president Dr. Gilbert Utas.

Dental Society on the CDA Board of Governors for four years and was a member of the executive council for two years.

Dr. Williams has also been active on CDA's councils on ethics, dental

materials and devices, hospital services and education.

He is a member of the Academy of General Dentistry, the Pierre Fauchard Academy and the Federation Dentaire Internationale.

Brig.-Gen. W.R. Thompson new president-elect

Brig.-Gen. W.R. Thompson is the new president-elect of the Canadian Dental Association.

He was named at the association's annual meeting in Calgary in September.

Dr. Thompson is a native of Campbellford, Ont. and graduated from the University of Toronto in 1949. He received certification in oral surgery from the same school in 1969.

He was recently appointed Commander of the Order of Military Merit in recognition of his meritorious service and devotion to duty as a member of the Canadian Forces.

He has served as a general practitioner, oral surgery specialist, clinical instructor and dental administrator with the military in Canada and overseas.



President-elect Brig.-Gen William Thompson

From 1961-65 Dr. Thompson was an instructor at the Canadian Forces Dental Services School at Camp Borden.

In 1973 he was made a Fellow of the

International College of Dentists and acted as honorary dental surgeon to the Queen.

Dr. Thompson was chairman of the Defence Forces Dental Services Commission of the Federation Dentaire Internationale from 1975-80 and became a member of the CDA Board of Governors in 1976.

He was named a Fellow of the Royal College of Dentists and received the Pierre Fauchard Medal from the National Order of Dentists of France in 1979.

He became a member of the CDA Executive Council in 1980, and currently holds the position of Director General Dental Services with the Canadian Forces.

Dr. Thompson is married and has three children.

Convention



Rencontre avec les hygiénistes. L'exécutif de l'Association des hygiénistes dentaires du Canada a raconté celui de l'ADC à l'occasion du congrès. De gauche à droite, première rangée: Mary Anne Wailing, secrétaire de l'ADHC, Pat Grant, présidente élue de l'ADHC; le Dr Donald Williams, président de l'ADC, Marge Bailey, présidente sortant de l'ADHC. Deuxième rangée: Hubert Drouin, directeur général de l'ADC; le brig.-gén. W.R. Thompson, président élu; le Dr Clyde Covit; le Dr Gilbert Utas, président sortant de l'ADC.

Hygienists meet CDA/The executive of the Canadian Dental Hygienists Association met with CDA executive at the convention. Front row, left to right, Mary Anne Wailing, secretary CDHA; Pat Grant, newly elected president of CDHA; Dr. Donald Williams, CDA President; and Marge Bailey immediate past president CDHA; back row Hubert Drouin, executive director of CDA; Brig.-Gen. W.R. Thompson, president elect; Dr. Clyde Covit; and Dr. Gilbert Utas, past president of CDA.



A la réunion conjointe de l'Association canadienne des gardemalades et des assistants dentaires, et de l'ADC, assis à la première rangée partant de la gauche: Marlene Paquin; la Présidente, Barb Peterson; le Dr Gilbert Utas, Président sortant de l'ADC; et Elaine Wesley, secrétaire de l'ACGA. Dans la rangée en arrière: le Dr Donald Williams, Président de l'ADC, entouré du Dr Clyde Covit et à gauche par le Directeur général, M. Hubert Drouin.

Seated in front from the left at the Canadian Dental Nurses and Assistants meetings with CDA are Marlene Paquin, President Barb Peterson, Dr. Gilbert Utas, past president of CDA, and Elaine Wesley, secretary of CDNAA. In the back row flanking CDA President Dr. Donald Williams, are executive director Hubert Drouin, left, and Dr. Clyde Covit.

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Joyful pessimist takes on the future

Messy, untidy, yet deeply hopeful. That is one man's image of the future.

Ruben Nelson, president of Square One Management Ltd., a futures-oriented consulting firm, spoke to delegates at the CDA Annual Meeting in Calgary about his vision of the future.

He said it is important to learn a sense of time. Society is slowly evolving to the Hebrew sense of time in which you deal in the present, go to the future, but live with the past.

Nelson said a number of things are happening today that will continue, and with which people must be prepared to deal.

He referred to the "Big Generation" — those born between 1952 and 1965. He predicts that by 1991 these people will no longer fit into the country's traditional elderly-male-dominated institutions, and pressures will be created.

The characteristics of this generation include: being the first to have education through high school and beyond; being the first truly urban generation; being mobile; being experience and feelings oriented; being alienated; having flexible sex roles; being the least formally religious and the least dutiful and rigorous.

"No province has a policy to deal with these people," Nelson said.

Using Alberta and Ontario as examples, he said Alberta's Big Generation population will soon be seriously "out of whack", and should be encouraging micro-electronic technology to reduce the demand for jobs, thus removing the Big Generation.

On the other hand, he said Ontario should be encouraging these people to leave to ease the province's social problems.

In the field of micro-electronics, Nelson says there has been a perceptual lag.

"It is just beginning to dawn on us



Ruben Nelson

that computers aren't computers," he said. "We used them in the first 10 years to make familiar things faster, but we now know it allows us to process information. By 1983 it will be cheaper to send information digitally than through the post office."

Because of all this high technology the demand for low-skilled people in jobs will decline.

Networking is another factor in Nelson's view of the future.

Essentially this means when you

need to know something, you find out who has the information and go to that person without reference to rank or authority.

"We haven't built networking into our organizations, we've built it out. Presidents talk to presidents," he said.

This approach leaves us without bureaucratic levels and hierarchy. There is a transformation now to holographic networks — all the information in the whole is contained in each part.

"Good families now have it, but our organizations do not," he said.

Nelson predicted the economy in the 80s will be worse than ever because "our practice is running ahead of our theory."

"We have no new theory. We're like blind men stabbing in the dark," he said.

He said in the 80s people will have to discover low cash-flow methods to deliver their services and finally realize that the large amounts of cash just aren't there any more.

"The future is not what it used to be. What we expected is not what we're going to get," he said.

He said ours is the first generation in 800 years to face fundamental change.

He said we're moving into a time when none of us know what to do, and those who expect incoherence in the 80s will be best off. We must live with the tension of saying "I don't know whether I know what I'm doing". This "operational doubt" will result in "cosmic confidence".

In terms of government, people must realize it is "fundamentally debilitating" to think we are unfit to govern ourselves and give this responsibility to others that we perceive "know better".

We must move towards connective personal responsibility, he said.

"I'm a joyful pessimist."

Dr. Brian W. Beeching

Interpreting Dental Radiographs

London, Update Books 1981, Pgs. 152
Price £12.00

This is a first edition of a book by a reputable teacher of a highly respected dental school, written on the subject of radiographic interpretation. It does not contain material on radiation physics or technique but devotes itself solely to radiologic interpretation. It is therefore a useful book for students to give an overview of the subject and to dentists in practice who would like to review some of the basic material that they may have studied.

It is divided into nine chapters dealing with normal anatomy, developmental abnormalities, caries and periodontal disease, the results of trauma, periapical changes, resorption and root canal treatment, cysts of the jaws, neoplasms and tumor-like lesions of the jaws, and finally, osteodystrophies involving the skull and jaws.

It is printed on flat paper and unfortunately the quality of the radiographs suffered in the printing reproduction, with many parts of the radiograph being "washed out" and suffering from a lack of contrast or sparkle. In some of the radiographic illustrations, particularly the extraoral radiographs in the chapter on trauma, the bony outline has been drawn in, in either black or white to help clarify the radiographic details that are missing.

There is a one-page (between pp. 56-57) color plate which illustrates by photographs such things as the LeFont type fracture lines of the skull, malignant melanoma of the maxilla, cherubism and cleido-cranial dysostosis. There are also some excellent line drawings where some red lines have been used to indicate the central ray illustrating extraoral technique and these red and black line drawings are used to excellent advantage to illustrate the buccal object rule with both intraoral films and the split image panorex film to show the buccal-lingual position of an impacted tooth.

Criticisms are that there is no depth of explanation of the processes that have produced the radiographic image i.e. in the section on osteomyelitis, there is no mention that the new bone formation at the border of the mandible is termed the involucrum nor what and where is a sequestrum. Nor does he tell us how to differentiate between osteitis and osteomyelitis.

On the whole, the book doesn't go into great depth in differential interpretation but is probably one that is useful as a capsule of radiologic interpretation so that students can obtain an over-all understanding of radiologic appearance.

This book was reviewed by Dr. John Reid, University of Western Ontario.

J. Ellis Paul B.D.S., L.D.S.

A Manual of Four-Handed Dentistry

Ed. 1, 1980,
Quintessence Publishing Co.
Inc. Chicago, Illinois,
publisher, 155 pages illustrated
(some colour) no appendix, indexed.
Price \$42.00

This book is a true manual written by Ellis Paul in a sequential, logical, step-by-step fashion to instruct both dental operator and chairside assistant in the basic principles of four-handed dentistry. It also serves as an excellent reference source for the experienced team to review and refine their procedures for more efficient dental care delivery.

The book is short, with a text of 155 pages and numerous black and white photographs of extremely excellent quality. A short chapter on tray systems and color coding contains five color pictures of equal quality.

Ellis Paul breaks the subject matter into 12 chapters, the first seven outlining in detail principles, seating, aspiration, vision,

instrument handling and exchange and tray systems — color coding.

The next four chapters provide step-by-step illustrated detail on procedures for selected clinical procedures (rubber dam, amalgam and resin restoration, impressions and crown and bridge procedures).

The final short chapter outlines a one-day participation program to train both dentist and assistant in the basic principles of four-handed dentistry in one day.

One of the most impressive features of this manual is the manner in which the illustrations parallel and complement the text. The reader can rapidly refer to any specific area of interest without having to read several pages of unrelated material.

The author suggests, in his preface, that there is a difference in equipment from one country to another and that all illustrations have been obtained from photographs taken within his own office. Most of the procedures, and all of the principles of four-handed dentistry, can be adapted to any modern dental operating equipment today. He has developed his techniques, using rear delivery systems which would not be my choice of equipment. However, minor changes in patient seating, control of the patient's chair, and aspiration can easily accommodate every principle which he has so carefully detailed.

In my opinion, this is an excellent book for the concerned practitioner and assistant who wish to refine and perfect their team effort at the chair. It could very effectively complement any participation program when dental personnel are being trained for the first time in the principles of four-handed dentistry.

This book was reviewed by Dr. A. Bruce Hord, University of Toronto.

*Elizabeth A. Pawlak
Philip M. Hoag*

Essentials of Periodontics

*The C.V. Mosby Company
2nd Edition 1980
174 pages \$16.75*

As the title indicates, this book primarily limits itself to a superficial view on basic topics in the field of Periodontology.

There are 14 chapters in this textbook. The greater portion of these, Chapters 4 to 10, identify periodontal disease entities and discuss them on the basis of 10 key factors: (1) definition, (2) clinical characteristics, (3) radiographic changes, (4) histopathology and pathogenesis, (5) etiology, (6) prognosis, (7) nutritional implications, (8) treatment, (9) patient education, and (10) preventive measures.

The nutritional implications, although general in information, create an awareness that nutritional deficiencies need to be considered when dealing with periodontal patients.

The reference list at the end of each chapter could be supplemented by more implicit review articles, rather than referrals to other major periodontal texts. One such reference by Zander H. and Polson, A.; "The present status of occlusion and occlusal therapy in periodontics" found at the end of

the chapter "Periodontal Occlusal Trauma", is an example of the type of reference that should be used more frequently.

References of this nature would refer the reader to current thinking on the topic and would go far towards establishing the intent of this book "to further expand and stimulate their (the readers) learning."

Chapter 2 "Basic Etiology of Periodontal Disease" could be further enriched with information concerning the role immune mechanisms play in periodontal disease.

Chapter 11 gives a concise and simplified account of periodontal diagnosis, prognosis, and treatment planning.

The book has its strongest impact in the field of preventive dentistry in Chapter's 12 and 13. These chapters cover plaque control therapy and initial root instrumentation. Detailed description of these treatment modalities make the 44 pages of reading a most practical clinical review for dental therapists and hygienists.

The text is richly illustrated with labelled diagrams and clear, sharp photographs.

The glossary at the end of the book will be a welcome help for those readers requiring definitions for dental terms used throughout the text.

The authors, in their preface, make it clear that this text represents concise and selective topics in periodontics. To this end they have met their objective.

This book could serve as a useful introduction to hygiene, dental assisting, and dental students in the field of periodontology.

Dental practitioners wishing an easy reading review on topics in periodontics will find this text applicable.

This book was reviewed by Dr. P.D. Schuller, University of Alberta.



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Simplified bleaching of discolored pulpless teeth

Jocelyn J. Lemieux, DDS
Maylon J. Todd, DDS, MS
Fort Hood, Texas

Today, general practitioners, in response to greater demand, spend more of their time practising endodontics. In many cases, modern dental materials permit the restoration of pulpless anterior teeth with satisfactory esthetic and functional results, without resorting to full crown coverage. However, there is a widespread misconception that endodontically treated teeth will inevitably darken or discolor, and a general lack of knowledge that when discoloration does occur, it can often be remedied by bleaching.

The purpose of this article is to describe an effective bleaching technique for non-vital teeth that can be easily and quickly accomplished by the general practitioner.

REVIEW OF THE LITERATURE

Treatment of the discolored root-filled tooth has been advocated in dental literature since 1895, when Garretson¹ reported the use of chloride as a bleaching agent. Later, authors such as Merrell² and Gottlieb³ popularized the use of superoxol and pyrozone ($H_2O_2 + \text{ether}$), activated by a photoflood lamp. Heat generated by the photoflood lamp caused breakdown of the bleaching solution with resultant liberation of nascent oxygen. This technique, however, was found to be very time-consuming.

Pearson⁴ in 1958, not only described the use of a heat lamp with pyrozone for his chairside procedure, but combined it with an inter-appointment medication of superoxol left in the pulp chamber for three days. In 1967, Nutting and Poe⁵ popularized the so-called "walking bleach" technique, in which a mixture of superoxol and sodium perborate is sealed in the pulp chamber for a

period of one week. In theory, because both of these chemicals release oxygen, their combination should potentiate the bleaching effect. In this technique, the use of externally or internally applied heat is eliminated.

Grossman⁶ and Ingle⁷ advocated the chairside technique, using a heat lamp combined with a "walking bleach". More recently, Tewari⁸ and Hodosh et al⁹ reported the use of a hyfrecator as a heat source. The hyfrecator is a controlled, solid-state direct heat instrument used to thermally activate the oxidizing agent against the surface of the tooth.

In 1972, Arens and his colleagues¹⁰ described the use of another instrument, called the Indiana University bleaching instrument.* This is especially designed for bleaching vital teeth with intrinsic stains, but it can also be used for bleaching pulpless teeth.

In summary, there has been little change in the past 25 years in the materials and techniques used for bleaching pulpless teeth. Many aspects of these techniques have already been described in detail, but most appear to be incomplete. Some authors depend on the heat lamp and a chairside procedure, while others rely solely on the "walking bleach".

Etiology of discoloration

Probably the most common cause of tooth discoloration is haemorrhage into the pulp chamber.¹¹ Staining results from the subsequent breakdown of the haemoglobin and its penetration into the dentinal tubules. Diffuse haemorrhage of the pulp usually results from trauma

*Union Broach Company, Long Island City, N.Y.

of pulp extirpation during the course of treatment. Any organic material, however, may cause staining if allowed to remain in the pulp chamber, and to prevent discoloration, all blood and organic debris must be thoroughly removed from the pulp chamber during endodontic treatment.

Another source of discoloration is root canal medications. Some stain the tooth *per se* while others stain upon decomposing or combining with another agent in the root canal. Some root canal medications known to cause staining are iodine solutions, silver nitrate, chloroazodin, mercuric chloride and other metallic salts.

Metallic filling materials as well as gutta-percha and root canal sealers may also cause discoloration.¹² Silver amalgam can produce a dark gray stain, copper amalgam a bluish black stain, and even gold can combine with products of decay to cause a dark brown stain. Stains of metallic origin are the most difficult to bleach.

Discolored pulpless teeth should be evaluated very carefully before being selected for bleaching. The prognosis of successful bleaching is by no means the same in all cases. The dentist must cautiously weigh the pros and cons of bleaching versus full crown coverage. Patients should also be informed of the fact that bleaching is not always permanently successful. Some teeth may slowly discolor again and require rebleaching, while in other cases, it may not be effective at all.

Technique Step-By-Step

The bleaching technique to be described is a fast, dependable and economical procedure. It uses both heat and chemical treatment advantageously and needs no special equipment.

1. Hand protection: the use of rubber gloves is recommended to prevent skin irritation.
2. The tooth is thoroughly pumiced and polished.
3. Shade guide and photographs, if available, are used to record initial shade and check progress of bleaching.
4. Apply Orabase** around the tooth to protect the gingival tissue.
5. Punch rubber dam with the smallest hole to acquire good adaptation.
6. Remove all excess debris in pulp chamber with a round bur.
7. Remove obturating material in the canal to 2 mm below the gingival line.
8. Place 1 mm layer of polycarboxylate cement over the root canal filling material to provide extra sealing protection.

** E.R. Squibb & Sons, Inc.

9. Wash tooth surface and pulp chamber with cotton pellet saturated with chloroform.
10. Dessicate with alcohol.
11. Adapt a cotton pellet into the pulp chamber and upon the entire labial surface of the tooth, to form a matrix for retaining the bleaching solution.
12. Saturate the cotton on the labial surface and in the pulp chamber with Superoxol (30% H₂O₂)*** using disposable syringe armed with a stainless steel needle.
13. Cover the patient's face for protection from bleaching agent.
14. Using an alcohol burner, heat to red hot the blunt end of a "Woodson No. 3" instrument and apply it to the saturated cotton pellets, both labially and internally. Always keep the cotton saturated with H₂O₂ and continue the heating procedure for 10-15 minutes to allow for thorough bleach of all areas.
15. Remove cotton, irrigate with saline and dry.

Walking bleach

1. Mix Superoxol (2 drops) with sodium perborate or sodium peroxyborate monohydrate (Amosan+) in a dappen dish to a white pasty consistency.
2. A few fibres from a cotton pellet are added to facilitate placement, since it has a very light consistency.
3. Fill the entire cavity, leaving only enough space to accommodate a double seal.
4. Double seal (a) Cavit† as inner layer, and (b) I.R.M.‡ cement as outer layer.

This double seal is necessary as the bleaching mixture continually gives off oxygen which tends to force the material out of the cavity.

With the "Walking bleach", maximum bleaching is obtained in 48 hours after placement. The bleached tooth should be a little lighter than desired for final results as it will usually darken slightly after treatment. The entire procedure takes approximately 30 minutes. The "walking bleach" can be repeated at the second visit if additional bleaching is required.

DISCUSSION

The action of lowering the coronal portion of the root canal filling to a point 2 to 3 mm below the cervical area of the tooth will prevent the colored canal filling from reflecting through the enamel in the gingival area.¹³

***Mallinckrodt, Inc., Paris, Kentucky. (Hydrogen peroxide ACS).

+The Knox Company.

†Premier

‡L.D. Caulk Co. (Reinforced zinc oxide eugenol cement.)

If a root canal has been filled with a silver point, it is extremely hazardous to bleach the tooth. To attempt to cut off the silver point below the orifice of the canal may dislodge it. Neagley¹⁴ reported that reducing the length of silver cone with a rotative instrument produces a loss of the apical seal with possibility of leakage through the apex. The best course is to remove the silver point and refill the canal with gutta-percha if bleaching is required.

Application of Orabase on gingival tissue is preferred to vaseline as a protective coating agent because of its greater viscosity and adherence to the gingiva. Washing the tooth with chloroform prior to bleaching helps dissolve organic debris from the dentinal tubules. Polycarboxylate cement, by nature of its adhesion to tooth structure, provides an excellent additional seal over the obturated filling material¹⁵. Cavit temporary filling is inserted as the inner layer of the double seal because of its sealing properties as reported by Parris et al¹⁶. A reinforced zinc oxide-eugenol cement such as I.R.M. is used for the outer seal for its strength as well as additional sealing properties.

Amosan (the brand name for a sodium perborate preparation) is usually readily available in the dental office and has the same desired effect as produced by sodium perborate.

SUMMARY

A review of the literature for bleaching discolored pulpless teeth revealed that some authors are still advocating a procedure using a heat lamp, while others recommend the "walking bleach" only. The technique described in this article introduces nothing new but combines the best elements of all the techniques previously described. The result is a simplified bleaching technique that is both efficient and effective.

Dr. Lemieux was a senior resident, general dentistry residency program, U.S. Army, Fort Hood, Texas, at the time of preparation of this article.

Dr. Todd is a lieutenant colonel D.C., U.S. Army, and is currently chief of Endodontic Service, Fort Hood, Texas.

REFERENCES

- 1 Garretson, J.E. A system of oral surgery. Ed. 6. Philadelphia, J.B. Lippincott Company, 1895, p. 231.
- 2 Merrell, J.H. Bleaching of discolored pulpless teeth. J. Canad Dent Ass. 20:380, 1954.
- 3 Gottlieb, B., Barron, S.L. and Crook, J.H. Endodontics. Ed. 1. St. Louis, C.V. Mosby, 1950, pp. 166-174.

- 4 Pearson, H.H. Bleaching of the discolored pulpless tooth. J Amer Dent Ass 56:64, 1958.
- 5 Nutting, E.B. and Poe, G.S. A new combination for bleaching teeth. Dent Clin N Amer, pp. 655-662, Nov. 1967.
- 6 Grossman, L.I. Endodontic practice. Ed. 9. Philadelphia, Lea & Febiger, 1978, pp. 322-330.
- 7 Ingle, J.I. Endodontics. Philadelphia, Lea & Febiger, 1967, pp. 607-611.
- 8 Tewari, A. et al. Bleaching of non-vital discolored anterior teeth. J Indiana Dent Ass. 44:130, 1972.
- 9 Hodosh, M., Mirman, M., Shklar, G. et al. A new method of bleaching discolored teeth by the use of a solid state direct heating device. Dent Dig 76:344, 1970.
- 10 Arens, D.E., Rich, J.J. and Healey, H.J. A practical method of bleaching tetracycline-stained teeth. Oral Surg 34:812, 1972.
- 11 White, E. Bleaching of pulpless teeth. S Carolina Dent J 32:44, 1974.
- 12 Brown, G. Factors influencing successful bleaching of the discolored root-filled tooth. Oral Surg 20:238, 1965.
- 13 Gail, S.B. Bleaching is the answer to most staining. Dent Stud 53:39, 1975.
- 14 Neagley, R.L. The effect of dowel preparation on the apical seal on endodontically treated teeth. Oral Surg 28:739, 1969.
- 15 O'Brien, W.J. and Ryge, G. An outline of dental materials and their selection. Philadelphia, W.B. Saunders Co., 1978, p. 165.
- 16 Parris, L., Kapsimalis, P., Cobe, H. et al. The effect of temperature change on the sealing properties of temporary filling materials. Part II. Oral Surg 17:771, 1964.

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Root fracture management with calcium hydroxide therapy

Pierre R. Dow, BS, DDS, MSc, FRCD(C)
Vancouver, B.C.

The results of impact injury to the anterior teeth of children have always been a devastating and frustrating problem in dentistry. They are usually complicated by the immature root formation present in the 7- to 10-year old age group. Furthermore, it seems to happen most frequently in the Class II malocclusion case where orthodontics is clearly indicated.

In cases where total coronal fracture occurs, conventional endodontic therapy can often provide sufficient root structure to support a prosthetic crown. Where the fracture is vertical, resulting in a split root, obviously there is no choice but extraction. However, in the intra-alveolar horizontal root fracture, many challenging possibilities exist. One will occasionally see malformed anterior roots in radiographs of adults, where a history of trauma in a youthful exploit is recalled. This is usually related to as the "nothing was done" form of therapy, illustrating the point that sometimes, given a chance, nature can heal its own wounds.

In the past, especially in the cases of intra-alveolar root fracture, extraction was the therapy of choice. In the 1950's, Ellis¹ believed that surgical intervention was the only action available. Later, some attempts at stabilizing the coronal root fragment and the separated tip were attempted by Ingle² and Frank³ through the use of a prepared post inserted as a central shaft in the canal. Unfortunately, the coronal and apical portions exhibit biological independence of movement and failure at the fracture site was the usual result. Andreasen,⁴ in his very complete work on traumatic injuries, clearly delineates the methods of treatment available today for handling the problems of the mid-root intra-alveolar fracture. As in many empirical therapies, a lot of luck in the absence of extensive tissue damage certainly influences the prognosis. However, there was some interesting work presented by Kaiser⁵ in 1964, and further elaborated by Frank⁶ in 1966, involving

the use of calcium hydroxide in a paste form as a material to promote apical and root growth in the wide open canal situation. It was not long before it was postulated that the exciting results obtained could possibly work in attempting root repair in cases of intra-alveolar fractures.^{7,8}

CASE REPORT

An eight year-old white male was referred for consultation. He had sustained a playground impact injury three weeks earlier in which his upper right central incisor had been "loosened". Aside from a marked Class II division I malocclusion, the clinical examination showed a clean, healthy, normal mouth with a low caries incidence. Radiographic examination, however, revealed the "looseness" of the upper right central incisor due to a widely separated mid-root fracture (**Fig. 1**). In evaluating the type of therapy to attempt, the boy's need for future orthodontics was a main factor. Consultation with an orthodontist presented the concept that the malocclusion could be corrected without too much load on the anteriors if the fractured member could be saved. With the large canal size as a major deterrent to the idea of an endosseous implant, the calcium hydroxide therapy was picked as the treatment of choice.

At subsequent appointments, the pulp in the coronal root portion was removed and the vital apical segment left intact. A paste of calcium-hydroxide, CMCP and one drop of glycerine was made and inserted into the canal. The coronal access was sealed with a heavy plug of cavite and all occlusal contact due to the extrusion of the coronal fracture segment was freed.

The patient was re-appointed in six months' time and admonished to phone immediately should the access plug become dislodged. Over the next 18 months the patient was seen at six-monthly intervals, and then at yearly inter-

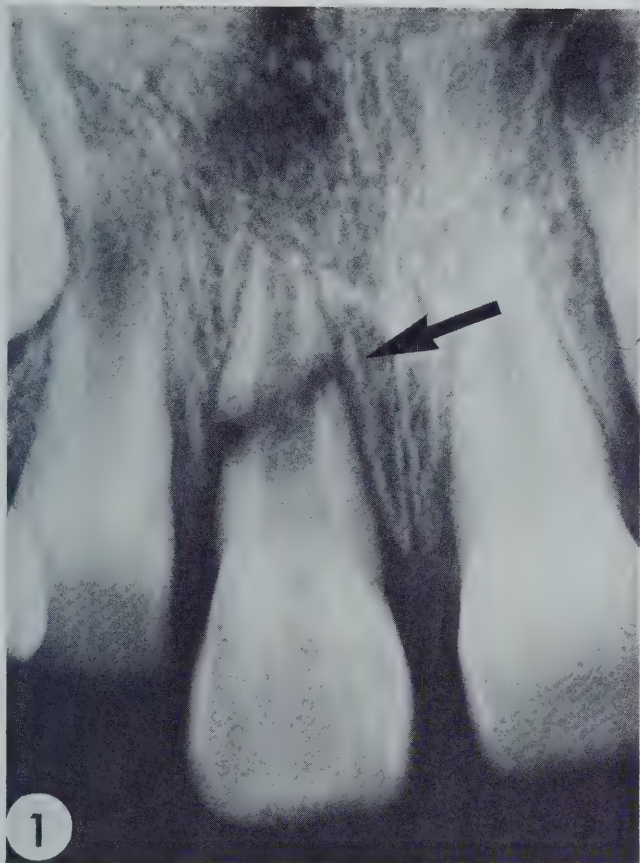


FIG. 1. The large separation at the site of mid-root fracture is evident (arrow). The incomplete root formation concurs with an 8-year-old's normal dentition.

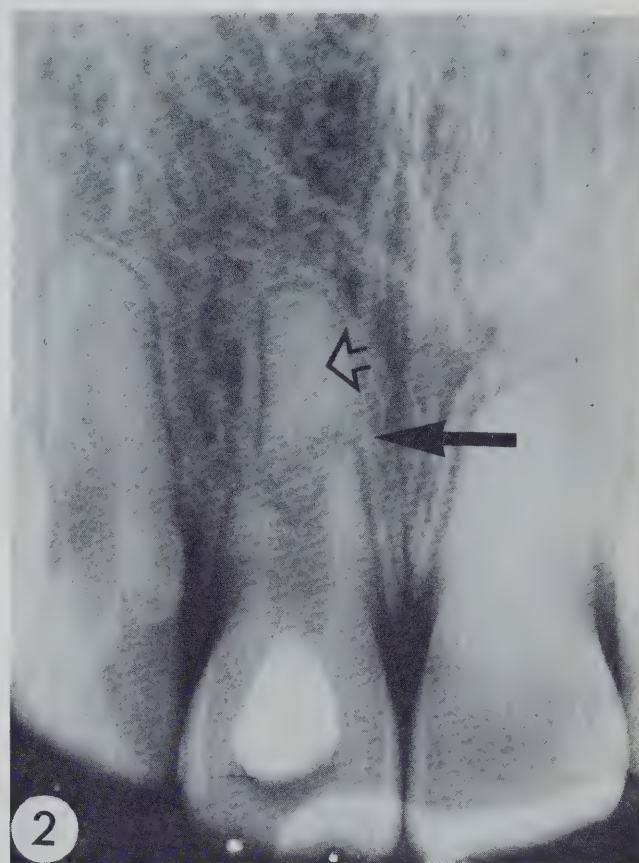


FIG. 2. Closure of fracture by hard tissue formation (dark arrow) seven years later. Note solidification of root tip (open arrow) and accelerated mineralization of the other central incisor's root canal system; as a natural result of the initial impact injury.

vals, at which time the fracture site and calcium hydroxide presence were evaluated. Over a period of seven years, the tooth is solid, has undergone no discoloration and clinically manifests itself as a normal functioning central incisor (Fig. 2). The orthodontist has completed his corrections and the final case is esthetically pleasing. The final canal obturation will be completed shortly.

SUMMARY

A case of the successful use of calcium hydroxide therapy for an intra-alveolar mid-root fracture has been presented. Although the initial radiograph of this type of impact injury is always most distressing, it must be remembered that the possibility of helping the body to restore a normal physiological tissue at the site of fracture does exist. The answer to how this occurs is still unresolved, but with the help of a co-operative parent and child, a great deal can be accomplished with the calcium hydroxide therapy.

Dr. Dow is head of Endodontics, Faculty of Dentistry, University of British Columbia, Vancouver, B.C.

REFERENCES

- 1 Ellis, R.G. The classification and treatment of injuries to the teeth of children. Ed. 3. Chicago, Year Book Medical Publishers, 1952.
- 2 Ingle, J.I. Endodontics. Philadelphia, Lea and Febiger, 1965.
- 3 Frank, A.L. Resorption, perforations and fractures. *Dent Clin N Amer* 18:465, 1974.
- 4 Andreasen, J.O. Traumatic injuries of the teeth. St. Louis, Mosby, 1972.
- 5 Kaiser, H.J. Management of wide open canals with calcium hydroxide. Presented at the American Association of Endodontists Annual Session, held in Washington, D.C. 1964.
- 6 Frank, A.L. Therapy for the divergent pulpless tooth by continuous apical formation. *J Amer Dent Ass* 72:87, 1966.
- 7 Steiner, J.C. and Van Hassel, H.J. Experimental root apexification in primates. *Oral Surg* 31:409, 1971.
- 8 Torneck, C.D., Smith J. and Grindall, P. Biologic effects of endodontic procedures on developing incisor teeth. Effect of pulp injury and oral contamination. *Oral Surg* 35:378, 1973.

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Announcements

CANADA

CDA/ODA 1982 National Convention, The Sheraton Centre, Toronto, Ontario, May 9-12, 1982. Contact: Mrs. W.C. Durham, Convention Manager, Ontario Dental Association, 234 St. George Street, Toronto, Ont. M5R 2P2.

November/novembre

Federation of Dental Societies of Greater Montreal Inc., Two Day Seminar, Sheraton Mount Royal, Montreal, Quebec, November 21-22, 1981. Contact: Federation of Dental Societies of Greater Montreal Inc., 6348 Beaucourt, Montreal N., P.Q. H1G 1G4.

Toronto Academy of Dentistry Annual Winter Clinic, Royal York Hotel, Toronto, Ontario, November 26, 1981. Contact: Academy of Dentistry, 234 St. George Street, Toronto, Ont. M5R 2P2.

December/Décembre

The Royal College of Dentists of Canada, Part II Examinations, University of Toronto, Faculty of Dentistry, December 4-5, 1981. Contact: Dr. John E. Speck, Registrar, Royal College of Dentists of Canada, 170 St. George Street, Suite 614, Toronto, Ont. M5R 2M8.

1982-

Hawaii Dental Association 79th Annual Scientific Session, Sheraton-Waikiki Hotel, Honolulu, Hawaii, January 24-29, 1982. Contact: Hawaii Dental Association, Exhibits Committee, 1000 Bishop St., Suite 805, Honolulu, Hawaii 96813.

The East Coast District Society Annual Winter Meeting, Fontainebleau Hilton Hotel, Miami Beach, Florida, January 28-30, 1982. Contact: East Coast District Dental Society, 420 South Dixie Highway, Suite 2-E, Coral Gables, FL 33146, U.S.A.

The East Coast District Society Annual Winter Meeting, Fontainebleau Hilton Hotel, Miami Beach, Florida, January 28-30, 1982. Contact: East Coast District Dental Society, 420 South Dixie Highway, Suite 2-E, Coral Gables, FL 33146, U.S.A. Dentists who pre-register by December 1, 1981, will be offered a \$25 discount.

Massachusetts Dental Society, VII Yankee Dental Congress, The Sheraton-

Boston Hotel, Hynes Auditorium complex, Boston, Massachusetts, January 14-17, 1982. Contact: Massachusetts Dental Society, 36 Washington St., Wellesley Hills, MA 02181, U.S.A.

Meeting: Kieferorthopadische Fortbildungstagung, Kitzbuhel/Tyrol, Austria, January 24-30, 1982. Contact: Meeting Secretariat, A-6370 Kitzbuhel, Webergasse 17, Austria.

The Jamaica Dental Association 18th National Convention, Mallards Beach Hyatt Hotel, Ocho Rios, Jamaica, February 14-18, 1982. Contact: Dr. G.C. McDowell, Chairman, Convention Committee, Jamaica Dental Association, P.O. Box 215, Kingston 5, Jamaica, W.I.

1982 World's Fair, Knoxville, Tennessee, May 1 — October 31, 1982. Contact: Anne Russell, Director of Special Affairs, City of Knoxville, P.O. Box 1631, Knoxville, Tennessee 37901, U.S.A. Phone: (615) 521-2549.

Australian Dental Association, 23rd Dental Congress, Perth, Australia, May 2-7, 1982. Contact: Australian Dental Association, 23rd Dental Congress, P.O. Box 29, Parkville, Victoria, Australia, 3052.

College of Dental Surgeons of British Columbia Convention, Hotel Vancouver, Vancouver, B.C., May 4-7, 1982. Contact: Venue West Executive Services Ltd., 1704 1200 Alberni Street, Vancouver, B.C. V6E 1A6.

The Dental Association of South Africa, Diamond Jubilee Congress, Durban, South Africa, May 10-14, 1982. Contact: Dr. Helmut Heydt, Executive Secretary, Dental Association of South Africa, Private Bay One, Houghton, 2041, South Africa.

The International Congress of Oral Implantologists World Congress VI for Oral Implantology, Hyatt Regency Hotel, Maui, Hawaii, May 21-23, 1982. Contact: Mr. Clifford J. Kirschner, Executive Director, The International Congress of Oral Implantologists, P.O. Box 2277, Grand Central Station, New York, N.Y. 10163, U.S.A.

Journées Dentaires du Québec, Queen Elizabeth Hotel, Montreal, Quebec, May 23-27, 1982. Contact: Dr. Morton R. Lang, Journées Dentaires du Québec, 801 Sherbrooke Street East, Suite 303, Montreal, Que. H2L 1K7. Tel. (514) 481-0397.

XIIth Biennial Conference on Education and Research is scheduled to take place in Halifax, Nova Scotia, June, 1982.

73rd Annual Conference of the Canadian Public Health Association, Explorer Hotel, Yellowknife, Northwest Territories, June 21-24, 1982. Deadline for submitting abstracts is December 31, 1981. For further details contact: Dr. David Martin,

Chairman, Scientific Program Committee, c/o Canadian Public Health Association, 1335 Carling Ave., Suite 210, Ottawa, Ont. K1Z 8N8. Phone: (613) 725-3769.

The 88th Annual Meeting of the American Dental Society of Europe, Park Hotel, Sandefjord, Norway, June 28-July 2, 1982. Contact: Hon. Sec. Dr. Brian J. Parkins, 57 Portland Place, London W1N 3AH, England.

The University of Texas — Applications are being accepted for the Postdoctoral Program, Dental Diagnostic Science at the University of Texas Health Science Center at San Antonio, for the class beginning July 1, 1982. Contact: Office of the Associate Dean for Advanced Education, Dental School, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Dr., San Antonio, Texas 78284, U.S.A.

The Sixth Congress of the International Association of Dentistry for the Handicapped, Harbour Castle Hilton Hotel, Toronto, July 20-25, 1982. Contact: Marvin D. Klotz, 124 Edward St., Toronto, Ont. M5G 1G6.

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1. Zacherl, W. A., "Clinical Evaluation of a Sodium Fluoride-Silica Abrasive Dentifrice," *Journal of Dental Research*, Vol. 60, Special Issue A, page 577, March, 1981.
2. Beiswanger, B. B., Gish, C. W. and Mallatt, M. E., "Effect of a Sodium Fluoride-Silica Abrasive Dentifrice Upon Caries," *Journal of Dental Research*, Vol. 60, Special Issue A, page 577, March, 1981.

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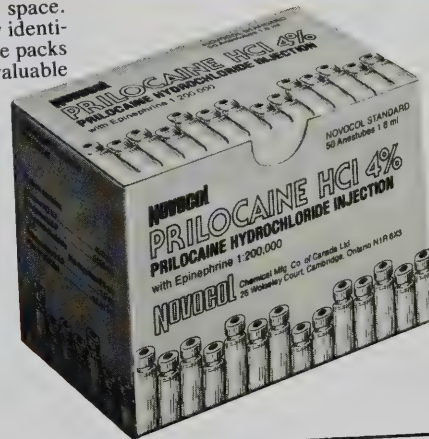
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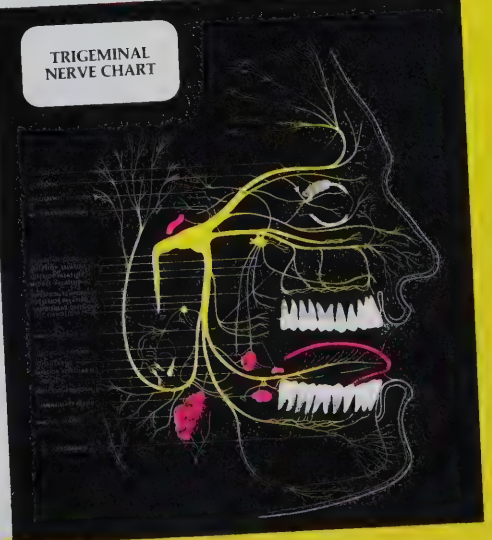
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776 **Financial statement**

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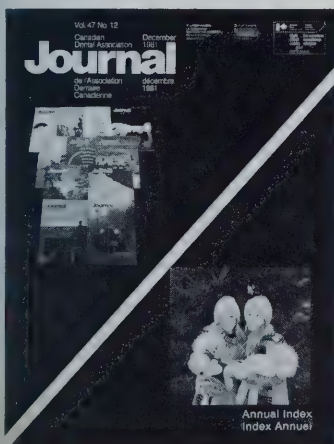
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Veuillez nous prévenir le 10 du mois de tout changement d'adresse pour recevoir le journal à votre nouvelle adresse le mois suivant.

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La direction du Journal ne partage pas nécessairement les opinions qu'expriment ses collaborateurs à moins que l'Association Dentaire Canadienne ne les ait adoptées officiellement.

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Journal

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1981

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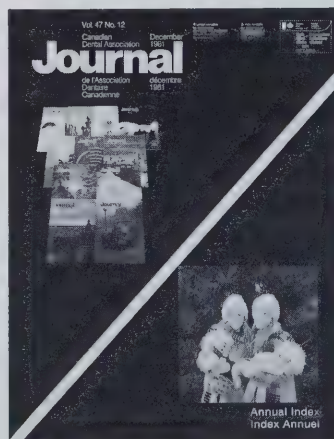
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YOU ARE KEY TO JOURNAL'S SUCCESS

The Canadian Dental Association Journal is a link.

It bonds association to association, and most importantly, dentist to dentist across the country.

In the past year, the Journal has attempted to provide outstanding scientific content, along with the most up-to-date news on the issues facing the dental profession.

We have reported on CDA's efforts in government relations, the setting of priorities for the future, and the association's work in coming to grips with dental manpower difficulties and the issue of dental therapists.

The concerns of the profession about alternate delivery systems have also been examined — from capitation and closed panels to retail dentistry.

These controversial issues cannot be ignored. They must be brought forward openly to generate discussion and, where necessary, answers to pressing questions. The Journal has, and will continue, to do this.

The old saying "you only get out what you put in" is especially fitting in the case of your Journal.

Input from readers is essential — whether it takes the form of a letter to the editor reacting to an article, ques-

tioning a scientific theory, or just telling us what you would like to see in the Journal — it is YOUR Journal, and your contributions are welcomed.

Increased submissions of scientific material and clinical articles will only serve to enhance the Journal's already considerable prestige.

The Journal is not only a vehicle for CDA to communicate with the profession — it is a vehicle that allows the profession to talk, and to talk back.

Communication within any organization is vital, particularly in a world that is in constant flux. A profession cannot hope to grow and develop without both internal and external dialogue.

CDA produces a wide variety of communications material, but the Journal is the key to our "internal" communications. YOU are the key to our success.

We look forward to another year of comprehensive news and scientific content.

*Dr. Alexander MacLeod
Chairman, Editorial Board*

UN INSTRUMENT DE LIAISON

Le Journal de l'Association dentaire canadienne est un instrument de liaison.

Il fait le lien entre les professions, entre les associations et surtout entre les dentistes du pays.

Au cours de l'année qui s'achève, outre les actualités touchant la profession dentaire, le Journal s'est efforcé de présenter des articles scientifiques de grande valeur.

Il a fait état des relations que l'Association entretient avec le gouvernement, de son ordre de priorité face à l'avenir, ainsi que de ses efforts pour résoudre les problèmes de la main-d'oeuvre et la question des thérapeutes dentaires.

Il s'est aussi penché sur les inquiétudes de la profession en ce qui a trait aux nouveaux modes de prestation des services, de la capitation et la pratique en circuit fermé à la dentisterie commerciale.

Ce sont là des questions controversées qu'on ne saurait ignorer. Au contraire, il faut en parler ouvertement pour susciter la discussion et, s'il le faut, obtenir des réponses aux questions les plus pressantes. Cette tâche incombe au Journal et il continuera de l'assumer.

Toutefois, comme il s'agit de VOTRE journal, il ne saurait le faire sans votre participation. Celle-ci est non seulement bienvenue mais aussi essentielle, même si elle ne

prend la forme que d'une lettre à l'éditeur pour réagir à un article, mettre en doute une théorie scientifique ou simplement suggérer des sujets de reportage. «Comme tu auras semé, tu moissonneras», dit le proverbe.

La présentation d'un plus grand nombre d'articles scientifiques ou de rapports cliniques ne fera qu'ajouter à la grande renommée qu'a déjà le Journal.

En outre de permettre à l'Association de communiquer avec la profession, celui-ci permet également à la profession elle-même de faire entendre sa voix et de réagir.

La communication est essentielle à la vie d'une organisation, surtout dans un monde en constante évolution. Ainsi, une profession ne saurait se développer ni grandir sans dialogue, à l'intérieur de son organisation comme avec le monde extérieur.

Si l'ADC produit, en ce sens, un matériel de communication des plus variés, le Journal n'en demeure pas moins l'élément clé de sa communication «interne». Et VOUS êtes la clé de notre succès.

Nous sommes prêts à entreprendre une nouvelle année chargée d'actualités et d'articles scientifiques.

Êtes-vous prêts à nous accorder vote appui?

*Dr Alexander MacLeod
Président, Bureau Éditorial*

COLGATE INTRODUCES A BREAKTHROUGH IN TOOTHPASTE FORMULATION.

TWO FLUORIDES IN ONE TOOTHPASTE.

New Colgate™ is the first and only toothpaste in Canada to combine the two fluoride compounds now most widely used to provide superior caries reduction.

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The clinical results lend support to the recommendation made by a team of experts reporting on the U.S. National Caries Program,** that different combinations of fluorides, bases, etc. should be studied "to determine the combination that is most effective in preventing caries."

In summary, the clinical trial provides evidence that Colgate's combination of fluorides gives superior caries protection. We urge you to recommend the only product that combines two fluorides in one toothpaste.

New Colgate.

*Published in the British Dental Journal, October, 1980.

**Evaluation of the National Institute of Dental Research National Caries Program. Volume 1, November, 1979, Page 56.

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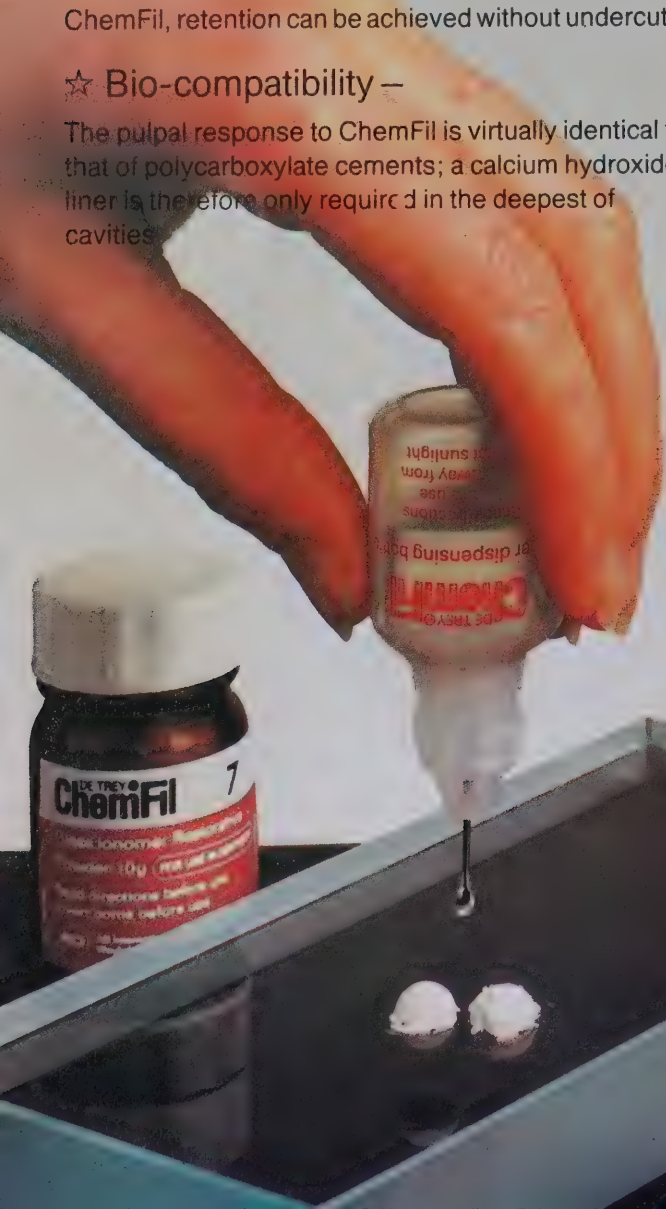


The result of repeated thermo-cycling in 0.5% acid fuchsin solution.
Right: a composite restoration showing marginal leakage.
Left: a ChemFil restoration with no trace of marginal leakage.

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In the past the liquid in glass ionomer systems was a solution of polyacrylic acid. A breakthrough by the De Trey research team has resulted in the polyacrylic acid being incorporated into the powder leaving water as the liquid. Clinically, this development brings significant benefits, viz: much higher physical strengths, reduced solubility, rapid easy mixing and a calibrated dispensing system.

It is possible to obtain an optimum mix every time by using the ChemFil dispensing system, thereby ensuring ideal physical properties in each restoration.



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Obituaries/ Nécrologies

WALKER, Leslie W. of Moncton, N.B. died Thursday, October 15, 1981, age 61. He was a member of the New Brunswick Dental Society.

LEGER, Edgar J., of Bathurst, N.B., a member of the New Brunswick Dental Society, died on July 20, 1981.

Ontario reaffirms fluoridation stand

June 20, 1981 marked the thirty-sixth anniversary of the introduction of fluoride into the Brantford water supply to improve the dental health of its citizens. Now, 72 per cent of Ontario residents on public water supplies enjoy the benefits of fluoridation.

Over the years fluoridation has proved to be the most effective and least costly public health measure to prevent dental decay. Extensive scientific research has uncovered no valid evidence that any health problem is caused or aggravated by drinking optimally fluoridated water.

Therefore, in accordance with the recommendations of the Canadian Dental Association I have no hesitation in stressing the importance of fluoridation for the early prevention of tooth decay and urging its adoption by municipalities, wherever feasible, as a safe, effective and well established public health measure.

*Dennis R. Timbrell,
Minister of Health*

Motrin (ibuprofen)

Product Information

Action: Ibuprofen has demonstrated anti-inflammatory, analgesic and antipyretic activity in animal studies designed to specifically demonstrate these effects. Ibuprofen has no demonstrable glucocorticoid effect.

Following a single 200 mg dose of ibuprofen in humans, useful blood levels were demonstrable in 45 minutes and still present in six hours but at barely detectable levels. Peak levels occurred at approximately one hour after ingestion. Levels were lower when taken in conjunction with food.

Ibuprofen is rapidly metabolized and eliminated in the urine. The excretion of ibuprofen is virtually complete 24 hours after the last dose. The serum half-life of ibuprofen is 1.8 to 2 hours. There is no evidence of drug accumulation or enzyme induction.

Ibuprofen has been found to be less likely to cause gastro-intestinal bleeding in doses usually used than is acetylsalicylic acid.

Clinical trials in man have shown activity of a dose of 1200-1800 mg of ibuprofen daily to be similar to that of 3.6 grams of acetylsalicylic acid daily.

Indications and Clinical Uses: Motrin (ibuprofen) is indicated for the treatment of rheumatoid and osteoarthritis. Motrin is also indicated for the relief of mild to moderate pain, accompanied by inflammation, in conditions such as musculo-skeletal trauma and post-dental extraction. Motrin is also indicated for the relief of pain associated with dysmenorrhea.

Contraindications: Ibuprofen should not be used in patients who have previously exhibited hypersensitivity to it or in individuals with the syndrome of nasal polyps, angioedema and bronchospastic reactivity to acetylsalicylic acid or other nonsteroidal anti-inflammatory agents. (see WARNINGS).

Ibuprofen should not be used during pregnancy, in nursing mothers or in pediatric patients because its safety under these conditions has not been established.

Warnings: Anaphylactoid reactions have occurred in patients with known A.S.A. hypersensitivity (see CONTRAINDICATIONS).

Peptic ulceration and gastrointestinal bleeding, sometimes severe, have been reported in patients receiving ibuprofen. Peptic ulceration, perforation, or severe gastrointestinal bleeding can have a fatal outcome, and although few such reports have been received with ibuprofen, a cause and effect relationship has not been established. Ibuprofen should be given under close supervision to patients with a history of upper gastrointestinal tract disease.

Precautions: Blurred and/or diminished vision, scotomata and/or changes in colour vision have been reported. If a patient develops such complaints while receiving ibuprofen, the drug should be discontinued and the patient should have an ophthalmologic examination.

Fluid retention and edema have been reported in association with ibuprofen, therefore, the drug should be used with caution in patients with a history of cardiac decompensation or renal disease.

Ibuprofen, like other nonsteroidal anti-inflammatory agents, can interfere with platelet aggregation but the effect is quantitatively less and of shorter duration than that seen with acetylsalicylic acid. Ibuprofen has been shown to prolong bleeding time (but within the normal range) in normal subjects. Because this prolonged bleeding effect may be exaggerated in patients with underlying hemostatic defects, ibuprofen should be used with caution in persons with intrinsic coagulation defects and those on anticoagulant therapy.

Patients on ibuprofen should be cautioned to report to their physicians signs or symptoms of gastrointestinal ulceration or bleeding, blurred vision or other eye symptoms, skin rash, weight gain, or edema.

When ibuprofen is added to the treatment program of patients who have been on prolonged corticosteroid therapy, and it is decided to discontinue this therapy, the corticosteroid should be tapered slowly to avoid exacerbation of disease or adrenal insufficiency.

Aseptic meningitis has been reported in connection with ibuprofen therapy in patients with systemic lupus erythematosus. Such patients may also develop hypersensitivity reactions to ibuprofen such as fever, rash or abnormal liver function more often than those with other disorders. Caution should therefore be exercised when considering ibuprofen therapy for patients with systemic lupus erythematosus.

Drug Interactions

Coumarin-type anticoagulants - Several short-term controlled studies failed to show that ibuprofen significantly affected prothrombin times or a variety of other clotting factors when administered to individuals on coumarin-type anticoagulants. However, because bleeding has been reported when ibuprofen and other nonsteroidal anti-inflammatory agents have been administered to patients on coumarin-type anticoagulants, the physician should be cautious when administering ibuprofen to patients on anticoagulants.

A.S.A.: Animal studies show that A.S.A. given with nonsteroidal anti-inflammatory agents including ibuprofen yields a net decrease in anti-inflammatory activity with lowered blood levels of the non-A.S.A. drug. Single dose bioavailability studies in normal volunteers have failed to show an effect of A.S.A. on ibuprofen blood levels. Correlative clinical studies have not been done.

Adverse Reactions: The following adverse reactions have been noted in patients treated with ibuprofen:

Note: Reactions listed below under Causal Relationship Unknown are those which occurred under circumstances where a causal relationship could not be established. However, in these rarely reported events the possibility of a relationship to ibuprofen cannot be excluded.

Gastrointestinal: The adverse reactions most frequently seen with ibuprofen therapy involve the gastrointestinal system.

Incidence 3 to 9%: nausea, epigastric pain, heartburn
Incidence 1 to 3%: diarrhea, abdominal distress, nausea and vomiting, indigestion, constipation, abdominal cramps or pain, fullness of the gastrointestinal tract (bloating or flatulence)

Incidence less than 1%: gastric or duodenal ulcer with bleeding and/or perforation, gastrointestinal hemorrhage, melena, hepatitis, jaundice, abnormal liver function (SGOT, serum bilirubin and alkaline phosphatase).

Central Nervous System:

Incidence 3 to 9%: dizziness

Incidence 1 to 3%: headache, nervousness
Incidence less than 1%: depression, insomnia

Causal relationship unknown: paresthesias, hallucinations, dream abnormalities

Dermatologic:

Incidence 3 to 9%: rash (including maculopapular type)

Incidence 1 to 3%: pruritis

Incidence less than 1%: vesiculobullous eruptions, urticaria, erythema multiforme

Causal relationship unknown: alopecia, Stevens-Johnson syndrome

Special Senses:

Incidence 1 to 3%: tinnitus

Incidence less than 1%: amblyopia (blurred and/or diminished vision, scotomata and/or changes in color vision). Any patient with eye complaints during ibuprofen therapy should have an ophthalmologic examination (see PRECAUTIONS).

Causal relationship unknown: conjunctivitis, diplopia, optic neuritis.

Metabolic:

Incidence 1 to 3%: decreased appetite, edema, fluid retention. Fluid retention generally responds promptly to drug discontinuation (see PRECAUTIONS).

Hematologic:

Incidence less than 1%: leukopenia and decreases in hemoglobin and hematocrit

Causal relationship unknown: hemolytic anemia, thrombocytopenia, granulocytopenia, bleeding episodes (e.g. purpura, epistaxis, hematuria, menorrhagia).

Cardiovascular:

Incidence less than 1%: congestive heart failure in patients with marginal cardiac function, elevated blood pressure

Causal relationship unknown: arrhythmias (sinus tachycardia, sinus bradycardia, palpitations).

Allergic:

Incidence less than 1%: anaphylaxis (see CONTRAINDICATIONS).

Causal relationship unknown: fever, serum sickness, lupus erythematosus syndrome

Endocrine:

Causal relationship unknown: gynecomastia, hypoglycemic reaction.

Renal:

Causal relationship unknown: decreased creatinine clearance, polyuria, azotemia.

Symptoms and Treatment of Overdosage: A nineteen month old child weighing 12 kg ingested from 2800 to 4000 mg and presented with apnea, cyanosis and responded only to painful stimuli. Oxygen and parenteral fluids were given and at 12 hours she appeared completely recovered. Two other children (10 kg each) ingested 1200 mg of ibuprofen each and there were no signs of acute intoxication or late sequelae. A 19 year old male who had ingested 8000 mg of ibuprofen reported dizziness, and nystagmus was noted. He recovered with no reported sequelae after parenteral hydration and three days' bed rest.

In cases of acute overdosage, the stomach should be emptied by vomiting or lavage though little drug will likely be recovered if more than an hour has elapsed since ingestion. Because the drug is acidic and is excreted in the urine, it is theoretically beneficial to administer alkali and induce diuresis.

Dosage and Administration: Rheumatoid arthritis and osteoarthritis: The initial daily dosage in adults is 1200 mg divided into 3 or 4 equal doses. Depending on the therapeutic response, the dose may be adjusted downward or upward. The daily dosage should not exceed 2400 mg.

Maintenance therapy, once maximum response is obtained, will range from 800 to 1200 mg per day.

Mild to moderate pain associated with inflammation, dysmenorrhea: 400 mg repeated as required every 4 to 6 hours. The daily dosage should not exceed 2400 mg.

Children: Due to the lack of clinical experience, ibuprofen is not indicated for use in children under 12 years of age.

Supplied: 200 mg (yellow), 300 mg (white), 400 mg (orange) sugar-coated tablets and 600 mg (peach) film-coated tablets in bottles of 100 and 1000.

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FDI World Dental Congress Report

Rio de Janeiro, Brazil
September 3 - 11, 1981

The Canadian Dental Association representation at the Congress was comprised of Dr. D.E. Williams, President and delegate, Dr. G.E. Utas, National Treasurer and delegate, Brig.-Gen. W.R. Thompson, past chairman of the Commission of Defence Forces Dental Services and alternate delegate.

At the Congress Dr. Beagrie was re-elected as a member of the Commission.

Prof. Louis Baume of Switzerland completed his two-year term as President of the FDI and was succeeded by Dr. T. Aggeryd of Sweden. Dr. J. Jardiné of France was elected to the office of President-Elect.

Seventy-three countries were represented with attendance considerably less than expected. There were 3,975 dentists in attendance compared with 3,200 in Hamburg in 1980 and 5,600 in Paris in 1979.

The CDA delegated met with the FDI Finance Committee, the American Dental Association delegation as well as attending General Assembly A, General Assembly B, the Question Time, the National Treasurers Meeting and several other functions.

Considerable discussion at all levels formally and informally was directed at the financial situation of the FDI.

The Council accepted the Finance Committee recommendations regarding the CDA surcharge on supporting membership dues; namely that CDA be permitted to continue the current format with the proposed budget and the statement of administrative expenses being submitted to the Executive Committee. A less restrictive, more flexible approach is evident in many other areas as well.

The CDA delegation withdrew the 1980 resolution relating to finances but stated the need for continuing

efforts to effect a more equitable base for the annual dues structure.

The CDA supported the resolution for a 25 per cent ceiling on member association dues payable by any one member association; this resolution was accepted. However CDA did not support the American Dental Association proposal for further future reductions of this maximum; that amendment failed.

Meon Group Travel of London England will be retained as consultants for the ensuing year to advise and assist in reduction of travel and accommodation expenses for the annual congress.

The 1980 statement of income and expense indicated a considerable deficit due to both increased expenditure and decreased income. A number of reasons are evident, including an unfavorable change in the exchange rate between the U.S. dollar and the pound sterling, a decrease in supporting membership less than anticipated attendance at World Congress and inflationary increases in travel and accommodation.

Proposals for improvements of the financial situation in 1982 include reductions in expenditures such as travel and accommodation, decreased per diems for FDI officers (from \$70 to \$35), decreased support for regional organization representatives to Council, closer monitoring of expenditures at Congresses as well as increased utilization of computer and word-processing facilities.

On the income side there will be increased dependence on the predictable income such as member association dues and less on the variable aspects such as supporting member dues, attendance at Congress and sale of publications. As well increased promotion of FDI and its activities should increase the supporting member dues as well as attendance at

After 1984 the FDI will receive 15 per cent of Congress enrolment fees and 50 per cent of net surpluses and a suggested 10 per cent of the gross rentals for the trade exhibition.

This report was submitted by Dr. Gilbert Utas

Officers elected

The Royal College of Dentists of Canada elected new officers at its recent annual meeting in Calgary.

The President is Dr. J.H.P. Main, Toronto; vice-president Dr. K.J. Paynter, Ottawa; Registrar/Secretary/Treasurer, Dr. J.E. Speck, Toronto; and past-president Dr. Norman Levine, Toronto.

Councillors are: Dr. M.J. Crompton, Moncton, Dr. D.W. Lewis, Toronto, Dr. J.S. Little, Edmonton, Dr. E.W.P. Luxford, Calgary, Dr. M.D. Peikoff, Winnipeg, Dr. D. Kepron, Montreal, Dr. F. Pulver, Toronto, Dr. P.T. Smylski, Toronto, Dr. D.W. Stoneman, Toronto, and Dr. A.N. Winnick, Toronto.

At the annual convocation ceremonies of the College, honorary fellowships were conferred on Drs. E.P. Harvold, San Francisco; Dr. Jack Kreutzer, Toronto; Dr. D.H. MacDougall, Edmonton; and Dr. A.L. Ogilvie of Vancouver.

Correction

The following section was inadvertently omitted from the English section of the Board of Governor's Report in the November Journal:

The Board has asked that the CDHA clarify its policy regarding private practice of hygienists in Canada. This request is precipitated by several pronouncements by the CDHA executive over the past year and a half, initially through a brief to the Hall Commission in 1979.

Scientific Activities of FDI

Previous articles have outlined the organization of the Federation Dentaire Internationale including the structure of the four Commissions and also the major activities of the recent congress in Rio de Janeiro.

This article outlines the major scientific activities and studies of the four Commissions including their Working Groups, in which the actual detailed studies are carried out. The major part of this work is carried out by correspondence supported by Working Group meetings during annual congresses.

a. Commission on Oral Health, Research and Epidemiology

This Commission is the largest FDI Commission. It was formed in 1979 from three former Commissions. The Chairman is Professor J. Arnamo (Finland) and its Working Group leaders and major activities for 1982 are:

(1) Dental Caries Studies — Leaders: Professor P.J. Holloway (United States)

- to finalize a technical report of the adopted document on cost-effectiveness of community fluoride programs for caries prevention.
- to update the FDI report on "Principle requirements for controlled clinical trials of caries preventive agents and procedures".

(2) Oral Health Promotion — Leader: Dr. R.Y. Norton (Australia)

- to finalize the "International Survey: Health Education Aspects of Preventive Dental Programs for School Age Children."
- to finalize the paper on "Prevention of Dental Caries and Periodontal Disease" and to organize an open session on the subject for the FDI congress in Vienna in 1982.

(3) Developmental Defects of Enamel

— Leader: Dr. T.N. Cutress (New Zealand)

- to finalize a classification system together with scientific and clinical knowledge on the etiology, prevalence and treatment of non-carious defects of the enamel.

(4) Epidemiology of Periodontal Disease — Leader: Professor R.D. Emslie (United Kingdom)

- to simplify and standardize methods of assessment for periodontal treatment needs.
- to continue the study on "Barriers to Effective Periodontal Health Care."
- to formulate goals for periodontal health for the year 2000.

(5) Oral Implantology — Leader: Professor H. Newesely (Federal Republic of Germany)

- to conduct a questionnaire on the successes and failures of implants.

In addition to the above Working Groups this Commission also participates in three Joint Working Groups with the World Health Organization as follows:

(i) Integrated Planning of Oral Health Services with special attention to periodontal disease — Leader: Professor G.S. Beagrie (Canada)

- an open session to outline a more "Simplified Measurement of Periodontal Disease" took place at the 1981 FDI Congress and this and other aspects will continue to be researched in 1982.

(ii) Statistical Methodology applied to Dental Epidemiology — Leader: Professor P.J. Holloway (United States)

- to prepare a critical review of

current statistical methodology in the conduct of controlled clinical trials of caries prophylactic agents.

(iii) Social Acceptability of Occlusal Conditions — Leader: Professor N.C. Cons (United States)

- to field test the prepared methodology for the assessment of socio-psychological indications for the treatment of dento-facial anomalies in three or four countries.

b. Commission on Dental Products

This Commission has completed numerous reports to standardize dental products and materials in the past few years and certain of its activities are in direct participation with the International Standards Organization (ISO). The Chairman of this Commission is Dr. J.W. Stanford (United States). Its Working Group leaders and major activities for 1982 are:

(1) Clinical Testing — Leader: Dr. G. Ryge (United States)

- to prepare protocols for evaluating *in vivo* wear of posterior composite restorative materials and amalgam restorations.

(2) Dental Pharmacological Materials — Leader: Dr. E. Mitchell (United States)

- to consider and report on infection control in the dental office.
- a review of the current recommendations for antibiotic prophylaxis in dental patients known to have cardiovascular diseases.

(3) Relations with Dental Industry and Trade — Leader: Dr. A. Atkinson (United Kingdom)

- completion of the recommended labelling guidelines for dental products.
- preparation of a classified list dealing with dental equipment.

- (4) **Dental Prophylactic Devices** — Leader: Dr. P. Nygaard Ostby (Norway)

- to prepare a report on dentifrice function parameters
- to integrate the statements on dentifrice function with those on toothbrushes and toothbrushing.

- (5) **Toxicity Testing** — Leader: Dr. I. Langeland (United States)

- the document "Recommended Standard Practices for Biological Evaluation of Dental Materials" has been completed.
- revision of the methodology for toxicity testing of implants.

- (6) **Status and Informative Reports** — Leader: Dr. D. Beech (Australia)

- finalized revision of a report on endodontic instruments, devices and materials.
- status reports on acid etching procedures and on glass ionomer cements were revised.

c. Commission on Dental Education and Practice

This Commission resulted from the amalgamation in 1979 of two separate Commissions and is chaired by Dr. W.D. Heffron (Australia). As well as the Working Group activities listed below, the Commission has proposed two new Working Groups for 1982 on ethics and jurisprudence and dental manpower.

- (1) **Portability of Licence** — Leader: Professor G.L. Howe (Hong Kong)
- questionnaires on the subject have been circulated and the results will now be studied and a report prepared.

- (2) **Continuing Dental Education** — Leaders: Professor E.S. Beagrie (Canada) and Professor E.D. Farmer (United Kingdom)
- evaluation and measurement of the effectiveness of continuing dental education.

- (3) **Ergonomics and Hygiene in Dental Practice** — Leader: Dr. B. Wagner (Federal Republic of Germany)

- to liaise with ISO regarding standards of dental equipment (lighting, stools, operating chairs and units) and to outline ergonomic aspects.

- to monitor developments affecting health and efficiency in dental practice and to investigate occupational hazards.

- (4) **Dental Auxiliaries** — Leaders: Professor N.P. Butler (Ireland) and Dr. W.D. Heffron (Australia)
- to complete the survey on the legislative standing of operative dental technicians.

- to finalize a document on the paper "Classification of Auxiliary Personnel".

- to complete the results of the multivariate analysis of job titles and job specifications.

d. Commission on Defence Forces Dental Services

Although this Commission's activities are more specifically directed than those previously outlined, past working group reports in the field of barodontalgia have had direct application to civilian air and diving activities. The Chairman of the Commission is Commander R. Cronstrom (Sweden). The Commission Working Groups are studying the following:

- (1) **Air Space Dentistry** — Leader: Lt. Col. O. Carlsson (Sweden)
- to study mandibular bone loss in flying personnel.
 - to investigate barodontalgia.

- (2) **Deep Water Submergence Dentistry** — Leader: Captain R.G. Triplett (United States)
- to study problems in deep water submergence situations.
 - to study the effect of hyperbaric oxygen in the treatment of oral and maxillofacial disease.

- (3) **Changing Role of the Dental Officer in War and Disaster Situations** — Leader: Colonel O. Schultz (Federal Republic of Germany)

- to thoroughly review past activity in this area and to prepare a report and suggested protocol for implementation.

Report prepared by Brig.-Gen. W.R. Thompson

Class project

The 1982 graduating class in the dental faculty of the University of Alberta has more than one goal.

They have not only set out to become dentists, they have created a special class project.

The 49-member class has incorporated itself as a non-profit society, of Dentistry '82 (Edmonton), and will be involved in a number of projects to raise funds to donate equipment to the Youville Wing for Geriatric Care at the Edmonton General Hospital.

The Society hopes to raise about \$20,000 through raffles, toothbrush exchanges, a casino and a variety of other activities. The plans now are to purchase a panograph and portable dental equipment, but this is subject to change, depending on funds raised.

The class decided on the project to mark both the International Year of Disabled Persons in 1981 and the International Year of the Elderly in 1982.

The chairman of the Society, Donna Wood, told the Journal the class is "trying to set a trend for other graduating classes." Another undergraduate class has already started plans for a class project in the same vein.

Further information can be obtained from Ms. Wood or vice-chairman Neville Headley at Room 3036, Dental/Pharmacology Bldg., University of Alberta, Edmonton. (403) 432-3117.

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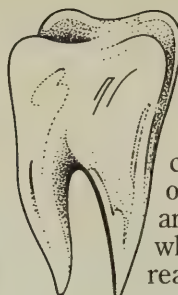
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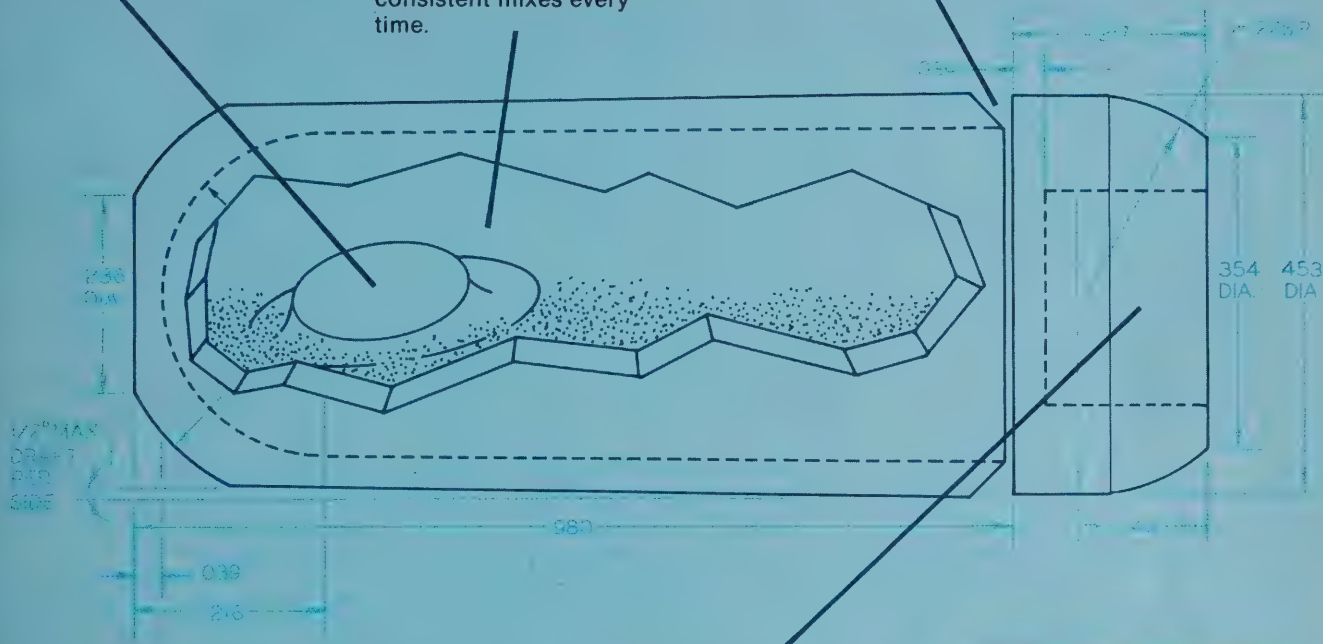
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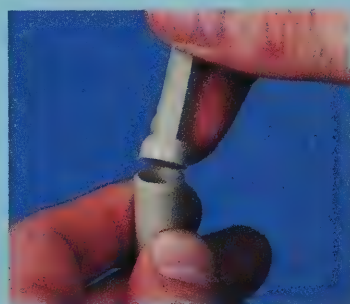
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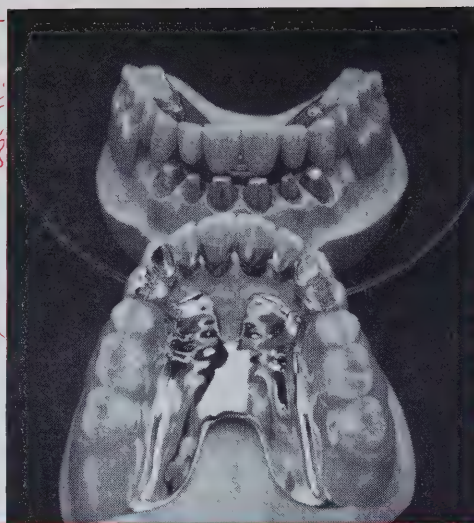
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Are You Looking For A Second Career?

Over the past year, this Journal and many others have been carrying articles that reflect the pulse of changing times for the dental profession. We have read of manpower surpluses, decreasing patient loads, increasing practice costs, and expanding roles for auxiliaries of all types. We also hear of dental bankruptcies and dentists seeking various forms of employment to supplement their incomes.

The new ODA publication "The Changing Dental Profession — New Directions for Practice in the 80's and Beyond" tells us of things that loom in the future such as department store dentistry, capitation/closed panel funding systems, franchising, and branchising — all brand new words to our profession.

High interest rates and R.R.S.P.s that take today's dollars, albeit with concomitant tax savings, to be returned in the future with inflated dollars are other concerns on the minds of many dentists.

For many, these challenges will be accepted with a high degree of success and rightly so for it is the only way that our profession will survive and we know it will. Some, and hopefully these will be few, will be crushed and become another statistic. Unfortunately there will be a few others who will choose to compromise on their standards in favor of ensuring a high income. Still others will choose not to follow any of these routes and will look to other avenues within the dental field where they may continue to utilize their developed skills without compromise.

One of these fields may be the Public Health System and this article is intended to inform dentists of the career paths that exist in this area with the Federal Government.

Before proceeding further, it should be stated that the field of Public Health is not one that is a solution to

the problems of private practice. Rather it is one that merely allows a dentist to trade one set of challenges for another. Nor is it a field that will have a universal appeal although it covers a broad spectrum.

By virtue of the British North America Act (BNA) the federal government was given the responsibility for the health care of all status Indian and Inuit people of Canada. This responsibility is administered by the Department of National Health and Welfare, Medical Services Branch, which has its headquarters in Ottawa.

Medical Services designates each Territory and Province as a Region with the exception of the east coast which is termed the Atlantic Region and covers the four Atlantic Provinces. A central office is maintained in each Region for purposes of program administration within those Provincial boundaries.

The structure of the dental program within this framework is as follows:

- The Ottawa headquarters employs one dental consultant. This individual is responsible for the development and monitoring of a comprehensive dental health program for the 320,000 status Indian and Inuit population including the non-native population north of the 60th parallel. The incumbent plays a central role in developing branch policies, operational guidelines and objectives relating to the program and liaises with the Regions, National and Provincial Dental Associations, University Dental Faculties and International Agencies.
- Each Region employs a Regional Dental Officer (DE-3) who is responsible for program administration, budgeting, planning and scheduling for all dental services within that Region. A typical example of the scope of responsibility

would be the Province of Manitoba wherein approximately 40,000 Indians reside on 59 reserves.

- Each Region is divided into Zones and it is the usual custom to employ a dentist as a Zone Dental Officer (DE-2) in each of these areas. The duties of this individual are usually divided into 50 per cent administration and 50 per cent clinical practice on a where and as required basis. The Zone Dental Officer, in turn, may hire Field Dental Officers (DE-1) for the sole purpose of clinical duties on reserves. This individual may be stationary such as in a hospital, but most often is required to do a great deal of travel using portable equipment. More often, recent graduates choose to contract their services for these duties on a full or part time basis rather than accept a position as a public servant.

Medical Services, covering all aspects of health care, often provides involvement in areas outside the dental field creating opportunities for individuals with a broad range of interests. There are examples of dentists who have risen to senior management levels becoming responsible for the direction, supervision, co-ordination, etc. of Health care programs in a more general field.

A career base provides only a position. Beyond that, opportunities are what the individual makes of them as dictated by his or her own initiative and interest. Ample scope exists for the development and implementation of pilot projects in new and innovative forms of prevention and the challenges in this field are only beginning to be explored.

The typical Regional Dental Officer will be charged with the responsibility of administering a budget in excess of \$1 million. This budget will include such things as payments to

In the News

private practitioners, salaries, travel, purchase of supplies and capital equipment, and in some cases, contracts with dentists, dental faculties, and Indian organizations with whom he negotiates for the supply of services.

The Federal Government offers an excellent benefit package estimated by accounts to be the equivalent of 13 per cent of salary. In addition to the 11 designated paid holidays, dentists receive three weeks holidays for the first two years, four weeks after two

years, and five weeks after 22 years. Employees also earn sick leave at the rate of 1-1/4 days for each calendar month and employee contributions to the pension fund are matched by the employer. Licensing and Association membership fees are also paid by the Federal Government.

This Journal is the usual carrier for advertisements for positions in the dental field with the Department. However, interested parties seeking further information can be directed to the appropriate authorities by con-

tacting their local Provincial Association or by writing to:

**Dental Consultant
Medical Services Branch
Health and Welfare, Canada
Jeanne Mance Building, Room 1970
Tunney's Pasture
Ottawa, Ontario K1A 0L3**

This material was prepared by Dr. W. R. Bedford.

Unique research project examines twins' teeth

A current research project, unique in the world, could be a milestone in the advancement of dentistry.

And it's all being done on twins' teeth.

Dental geneticists are trying to unlock some of the mystery surrounding twins by studying the roles heredity and environment play in the dentition of twins in Canada.

If they find the key, dentists will be able to determine the causes of malocclusion and develop appropriate treatments.

This innovative research, which will have a profound influence on future genetic research and orthodontic prevention, is being conducted jointly at McMaster University Medical Centre in Hamilton and Indiana University in Indianapolis.

The dental geneticists involved in the project have collaborated to collect new data on a group of adult twins born in Toronto between 1936-59. By studying the twins' teeth and jaw formations and noting their dental histories, the researchers hope to determine whether malocclusion and other occlusal disorders such as overbite and spacing are caused by heredity or environment.

The twins' teeth may also help prove whether eating habits affect dental development.

Research assistant Adam Winterton, who works out of the Medical

Centre at McMaster, explained, "The working hypothesis is to determine if there are prenatal or maternal effects on malocclusion."

Evidence will point to this fact, he added, if there is a difference between the identical twins born in one placenta or sac (monochorionic) and identical twins born in two placentas (dichorionic). Twins who have developed from two placentas will have matured in two separate and different environments within the womb.

"If there is a greater correlation between the monochorionic twins than the dichorionic twins, then there are definitely prenatal effects (at work on the first group)," Winterton said.

The project's chief investigator, Dr. Rosario Potter, a dental geneticist working out of Indiana U., has been studying dental occlusion since 1968.

Dr. Potter's preliminary findings in the field prompted her to investigate the types of twins more closely.

Traditionally, twins have been divided into the fraternal (or dizygotic) and identical (monozygotic) categories. But Dr. Potter decided to go one step further and compare the two types of identical twins (monochorionic versus dichorionic).

"We are comparing the two types of identical twins which has never been done before... throughout the world. So it's really three types of twins we're looking at here," she said.

Dr. Potter is able to conduct this comparative analysis using the original data collected on this same group of twins when they were born. Placental records were taken on 1,800 sets of twins in the 22-year period from 1936-59 by Dr. Irene Uchida, now a professor at McMaster and the project's co-investigator. (At the time, she worked under the supervision of Norma Ford Walker, who came to prominence studying the Dionne quintuplets case.)

Dr. Potter hopes the new data will "tell us very important things about environmental components (and how they relate to occlusal development in the twins)."

Although she and her assistants "are still at the data gathering stage", Dr. Potter is quite excited about the project and what it will reveal about occlusal traits in twins.

In "Variance of Occlusion Traits in Twins" she and co-authors Robert Corrucini and Larry Green wrote for the Journal of Craniofacial Genetics and Developmental Biology earlier this year, she says, "Occlusal disorder is usually regarded as neither predictable nor preventable. An understanding of the relative levels of genetic and environmental determination of occlusal traits should have a profound impact not only on clinical orthodontic prevention and treatment plan-

ning but also... on directions for future genetic research."

The researchers have been "going full force in collecting data on the three categories of twins" since they began six months ago, Dr. Potter said. They do not expect to complete the data gathering process until February 1983.

They are aiming, in this time frame, to gather data on about 200 pairs of twins and have already documented 60 sets.

In this statistically significant sample, Winterton explained that all the twin sets are of the same sex. The group felt it would be adding an extra variable to the data if it studied mixed pairs. A limit was also placed on the ages (the twins are between 22 and 32)

because the group wanted to steer away from studying occlusion in older twins where the effects of wear on the teeth are more evident, he said.

"This will make analysis more difficult," Winterton added.

Working with Dr. Potter, Dr. Uchida and Winterton on this four-year study, financed by the National Institute of Dental Research with grants nearing \$200,000, are: Dr. Ron Temple, a Toronto dentist who is making the dental casts of the subjects, and Dr. Terry Reed of Indiana, who is correlating the dermatoglyphics (hand and foot prints).

Winterton's responsibility lies in gathering all non-technical data obtained from interviews and documenting the genotypes (prints) and blood

types. The genotyping statistics are then sent to Dr. Reed who determines whether the prints are identical.

Dr. Temple schedules visits to the twins' homes so he can measure the bite and take plaster casts of the jaw. He also notes whether the twins are right or left-handed and have had orthodontic treatment.

The casts and other relevant information are sent to Dr. Potter.

Although the project is still very much in its early stages, Dr. Temple said he has noted "certain striking similarities in the dental arches" of some identical twins.

This new research will produce new findings about the effects of heredity and environment on certain occlusal disorders, which would enlighten both dentists and geneticists.

Mobile Dental Clinic for Disabled Persons



The University of Toronto's Faculty of Dentistry has launched a mobile dental van project to make dental treatment more accessible for disabled persons in underserved areas of the province.

The project is financed by a \$284,000 grant from the Atkinson Charitable Foundation and donations from the Dental Students Society and the Dental Nurses and Assistants Alumni Association.

Following a 1975 provincial task force to study Community Dental Services for the mentally retarded and physically handicapped in the province, under the chairmanship of Dr. Norman Levine, a pilot project in North Bay and Sudbury showed that such a clinic would help serve the dental needs of that segment of the population for which such services had been either very limited or non-existent.

The pilot project's success convinced the Faculty that construction of its own trailer to house the clinic would allow it to fully develop its own objectives with regard to the dental needs of physically and mentally handicapped persons and the teaching of dentistry as it applies to this segment of the population. During the two years the pilot project was in operation, the clinic was conducted in a Government of Ontario owned and equipped trailer on loan from the Department of Health, Community Services Branch, and staffed by members of the Faculty of Dentistry.

With full support of the Atkinson Foundation, the new dental coach of the University of Toronto was completed and was stationed in New Liskeard, Ontario in July 1981 to serve the handicapped in all the surrounding communities as well as those in New Liskeard.

The mobile clinic has a ramp for easy access as well as other modifications which allow easy accessibility for wheelchairs. The operatory is very compact and radiographs can also be taken. General anaesthesia, as well as more complicated procedures cannot be undertaken in view of the limited space and facilities, but patients are referred to appropriate specialists.

The service is free and renders primary dental care for qualifying persons. The waiting room has all the comfort of a living room. It is a totally contained apartment and office which will be moved from time to time to other parts of the province upon request.

The mobile clinic is staffed by one dentist from the Faculty of Dentistry on a rotation basis, and a dental assistant recruited from the area. There are live-in quarters for the dentist who stays with the trailer.

During this year, senior dental students will also attend on a rotation basis for one week to gain additional experience in treating the disabled as an elective program of the Faculty of Dentistry.

Award established in name of Dr. D.E. Williams



The classmates of Dr. D.E. Williams, President of the Canadian Dental Association have honored Dr. Williams in a special way. Dr. A.E. Cluett, left, made the presentation.

Dr. A.E. Cluett, one of Dalhousie dental school's 1955 graduates, announced at the CDA annual convention in Calgary that the Dr. D.E. Williams Prize will be awarded annually to a dental student at Dalhousie for scholastic achievement.

The final details have not been worked out as to whether the book prize will be awarded to a third or final year student and in which discipline.

Dr. Cluett said the class of 1955 "wanted to honor Dr. Williams" in some way in recognition of his election as president of CDA.

National Dental Health Month campaign starts

Good dental hygiene is more important than ever before, especially with today's emphasis on fast and highly processed foods.

This message underlies the upcoming National Dental Health Month campaign for April, 1982. It is stressed throughout the NDHM planning kit, which contains a wide range of resource materials such as speeches, newspaper articles, suggestions for program planning and dental health activities in the schools, pamphlets and nutrition materials.

The kits are distributed to each provincial association in Canada which, in turn, sends them out to the local dental societies. These kits are integral to the entire campaign because they contain valuable aids for organizers who wish to hold National Dental Health Month activities at the community and provincial levels.

The NDHM slogan for 1982 is "Smile Canada" and the national chairman is Dr. Michel Carvonis of Hull, Quebec.

Promotional materials including the kits, posters and decals carrying

the slogan are available by order from the provincial association. Dental health films and pamphlets are available from CDA headquarters. The order forms are contained in the kits. Buttons will again be supplied by the Canadian Dental Hygienists' Association.

Elementary schools pupils can actively participate in National Dental Health Month through a special post-

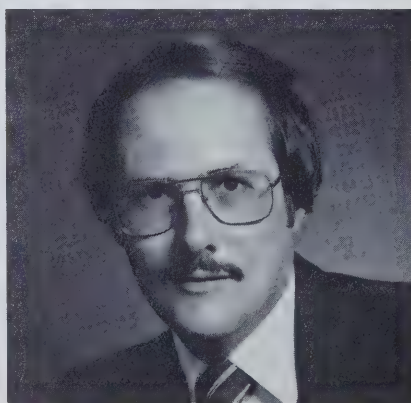
er contest. The three national winners will receive bicycles.

Remember to mark National Dental Health Month on your calendar.

Prepare to participate any way you can and say "yes" with a smile if asked to help out.

The success of the 1982 campaign depends on your involvement at the local, provincial or national level during the month of April and the year-round.

CDSPI has new general manager



Kingsley D. Butler has been appointed general manager of Canadian Dental Service Plans Inc.

Mr. Butler was born and educated in Toronto and received his C.A. from Queen's University. He was comptroller of a large national association for eight years, and administered data processing, systems and financial management activities. Following that he was in public practice for three years.

He will be actively involved in the administration and management of all CDSPI programs in his new position.

Mr. Butler is married and has one child.

If you're insured through the Canadian Dentists' Insurance Program

1981 Was a Very Good Year

Here is a summary of the improvements to the Canadian Dentists' Insurance Program announced or implemented in 1981:

LIFE INSURANCE

- 10% premium reduction effective Jan. 1, 1982.
- 10% coverage increase for participants, without medical evidence.
- maximum coverage increased to \$370,000.

DEPENDENTS' LIFE INSURANCE

- children's coverage increased to \$5,000 with no increase in premium.

ACCIDENTAL DEATH AND DISMEMBERMENT INSURANCE

- maximum coverage increased to \$150,000.

LONG-TERM DISABILITY INSURANCE

- Cost-of-Living Option introduced with a "no medical" enrolment.
- \$500 additional monthly indemnity offered with a "no medical" enrolment.
- maximum monthly indemnity increased to \$4,000.

OFFICE OVERHEAD INSURANCE

- \$500 additional monthly indemnity offered with a "no medical" enrolment
- maximum monthly indemnity increased to \$6,000.

OFFICE CONTENTS INSURANCE

- flood damage coverage added.

GENERAL LIABILITY INSURANCE

- "voluntary" property damage coverage added.

This list of improvements shows what can happen when an insurance plan puts your interests first.



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1981 a été une excellente année

Voici un aperçu des améliorations du Régime d'assurance des dentistes du Canada annoncées ou apportées en 1981.

ASSURANCE-VIE

- Réduction des primes de 10 % au 1^{er} janvier 1982.
- Augmentation de 10 % des garanties des participants, sans justification d'assurabilité.
- Augmentation du capital assuré maximum à \$ 370 000.

ASSURANCE-VIE DES PERSONNES A CHARGE

- Augmentation à \$ 5 000 de la garantie des enfants sans augmentation de prime.

ASSURANCE DÉCÈS ET MUTILATION ACCIDENTELS

- Augmentation du montant de garantie maximum à \$ 150 000.

ASSURANCE INVALIDITÉ PROLONGÉE

- Introduction de l'option d'indexation sur le coût de la vie, sans justification d'assurabilité.

- Offre d'un supplément d'indemnité mensuelle de \$ 500 sans justification d'assurabilité.

- Augmentation à \$ 4 000 de l'indemnité mensuelle maximum.

ASSURANCE DES FRAIS GÉNÉRAUX

- Offre d'un supplément d'indemnité mensuelle de \$ 500 sans justification d'assurabilité.

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- Adjunction de l'assurance contre les inondations.

ASSURANCE DE LA RESPONSABILITÉ CIVILE NON PROFESSIONNELLE

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La liste ci-dessus vous montre ce qu'un régime d'assurance peut faire lorsque ce sont vos intérêts qui passent en premier.



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Accreditation classifications revised

The Canadian Dental Association's Council on Education has approved the revised classifications for accreditation status.

The Council reserves the right to place term or other conditions upon any of these categories.

The *accreditation eligible* status (for newly-formulated programs) is granted on the basis of a limited site visit and/or an institutionally prepared prospectus (a proposed program outline which includes type of courses, number of faculty members, etc.). This proposed educational program meets the minimum requirements for approval.

On the basis of a limited site visit and/or a prepared prospectus the above program is granted *preliminary approval* status year to year if it continues to appear to meet the minimum approval requirements and

until the students of the initial class are enrolled in the final year.

Provisional approval status (for established programs) is given on the basis of a site visit and an institutionally prepared prospectus to a program found to have a number of major deficiencies or weaknesses in one or more specific areas. Although this classification indicates the seriousness of these weaknesses, the program is still considered adequate to meet the eligibility requirements for licensure and board examinations. If the weaknesses are not corrected, however, the accreditation status will be withdrawn. Significant progress must be demonstrated within one year.

Conditional approval is granted to an educational program where specific deficiencies or weaknesses

that exist in one or more basic areas of the program can be corrected in a reasonable length of time, the period not to exceed two years. Although the program is considered adequate to meet the eligibility requirements for licensure and board examinations, the institution receiving this status must provide a progress report at the end of the first year.

If a program achieves or exceeds the minimum requirements for approval as established by the Council on Education, the program has no serious deficiencies or weaknesses. However, recommendations or suggestions relating to program enhancement are generally included in the evaluation.

The Council on Education announces the accreditation awards on an annual basis.



The 13th Annual Canadian Dental Students' Conference was held in Halifax, Nova Scotia from September 23-26, 1981. Sponsored by Colgate-Palmolive through the Canadian Fund for Dental Education, the conference is attended by representatives from each of Canada's ten faculties of dentistry who in turn comprise CDA's newly revised Council on Student Affairs.

FROM LEFT TO RIGHT:

- Front Row: Licia Verardo (University of Western Ontario) — Rita Hurley (McGill University) — Dr. Lynn Tomkins (Windsor) — Linda Teteruck, CDA Director of Education — Sandra Grenier (Université Laval)
- Second Row: Bill Liang (University of British Columbia) — Tim Mahoney (University of Alberta) — Peter Judd, Chairman, (University of Western Ontario) — Dr. John MacKay, CDA Executive Council — Dr. Bob Brandon, Consultant.
- Third Row: Graham Usher, Conference Co-Ordinator, (Dalhousie) — Michael Cormier (Dalhousie University) — Andy Hasgawa (McGill University) — Alain Thivierge (Université de Montréal)
- Fourth Row: Sandy Mutchmor (University of Manitoba) — David McLeod (University of Saskatchewan) — David Kapusianyk (University of Saskatchewan) — Dr. Hardy Limeback (University of Toronto).

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Q. How does image quality compare?

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Edited by RAY E. STEWART, D.M.D., M.S. Associate Professor, Departments of Pediatric Medicine and Dentistry, Division of Medical Genetics, Harbor-UCLA Medical Center, University of California at Los Angeles, Schools of Dentistry and Medicine, Los Angeles, CA; THOMAS K. BARNER, D.D.S., M.S., F.A.C.D., Professor of Pediatric Dentistry and Associate Dean, University of California at Los Angeles, School of Dentistry, Los Angeles, CA; KENNETH C. TROUTMAN, D.D.S., M.P.H., F.A.C.A., Associate Professor and Chief, Division of Pediatric Dentistry, Harbor-UCLA Medical Center, University of California at Los Angeles, Schools of Dentistry and Medicine, Los Angeles, CA; and STEPHEN H. WEI, DDS., M.S., M.D.S., F.R.A.C.D.S., F.I.C.D., Professor and Head, Department of Pedodontics, University of Iowa, College of Dentistry, Iowa City, IA; with 67 contributors, ISBN 0-8016-4804-1, October 1981. 1,088 pages, 1,192 illustrations. \$93.75 (H)

Widely-respected authors provide up-to-date, comprehensive material on both the science and the technique of pediatric dentistry in this volume. It offers more thorough coverage of orthodontic topics than any other pedodontic work. An especially interesting discussion explores the entire range of behavior management approaches.

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In a concise, lucid manner, this book presents the clinical responsibilities of the dental hygienist. It is written in outline format, making extensive use of tabular material and throughout, refers to the way specific drugs and/or conditions affect dental hygienist practice.

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This new comprehensive, well illustrated textbook of local anesthesia as used in the oral cavity gives in-depth coverage of both basic science and clinical aspects of local anesthesia.

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Exercises in Dental Radiology — Volume 4

*W.B. Saunders Company
Toronto, Ontario \$21-20, 242 pages*

In the preface to their book the authors state the opinion "that learning should be fun" and the hope "that this unique package will be interesting and entertaining". The attempt to achieve these goals is apparent throughout the book even to the extent, at times, of presentations along the lines of a party game. The volume is not meant to be comprehensive or original. The sources of material are acknowledged in a list of 19 contributors and five collaborators.

There are 16 sections, 14 of which cover specific topics of physics and technique relating to oral radiography. Section 15 consists of historical notes and the last section is a quite extensive final examination review. Two appendices contain a review of definitions and aspects of the future of radiology. There is a comprehensive index, which is no mean achievement in a book of this type.

Most sections are made up of statements which include blank spaces to be filled in, and of multiple choice questions. Section 16 comprises multiple choice questions, true or false statements,

matching statements and calculations. Throughout the book, the correct answers are provided in a broad margin on the right side of the page. This is a pleasant change from the format of the previous volumes in the series and eliminates the effort of turning pages while seeking the answers.

Inevitably, some of the exercises are ambiguous. This applies particularly to the "filling in of the blanks" sections. A good example of this appears on page 34: "X-rays have certain properties which make them unique. They are (1) and very (2)....." This reviewer did not feel too upset at responding incorrectly in such instances. However, such occurrences are infrequent. Most of the multiple choice questions especially are valid and unambiguous.

It is never possible to please all of the people all of the time. Some readers will consider the emphasis too much on some topics and too little on others. It is debatable whether the year of introduction of rotating anodes is worthy of committing to memory. The same might apply to the name of Roentgen's wife, even though her hand was used to produce the first radiograph. The section on radiation protection practice could have been given greater emphasis while the mechanisms of the biological effects of radiation are rather unnecessarily detailed.

The section on the use of the parallax principle for localization is complicated by reference to both Clark's and Richard's methods. Since the apparent movement of objects is related to the position of the source of x-rays in one case and to the angulation of the cone in the other, this can give rise to confusion. It might have been preferable to restrict the coverage to one of these methods.

This reader disagreed with a few points. The diagram of an auto-

transformer on Page 12 has two coils instead of one. On Page 48, far reaching properties are ascribed to the "central ray". The last letter of the word "rem" is said to abbreviate "mammal" (Pages 50, 182) whereas "man" is the more common form. In the consideration of screen speed on Page 96, no mention is made of phosphor particle size. Although often quoted, there is no justification for relating the fixing time to the development time (Page 111) nor in stating a fixing time of 10 minutes (Page 115). Fixer in the developer does not usually cause dark films (page 126) nor does excessive fixation cause staining (Page 177). Adumbration is not another name for cervical burnout (page 178). Secondary radiation is not proportional to the square of the distance the operator stands from the patient (Page 166). Changes in mAs affect contrast as well as density because of the non-linear characteristic curve (Page 210). The Panorex is credited with being the first commercially available panoramic x-ray machine (Page 172) when in fact the Watson Rotagraph pre-dated it by a year or so.

There are further isolated discrepancies throughout the book. Cone length is said to affect radiation dose on Page 85 but not to affect it on Page 214. Kells is credited with the first intraoral radiograph on Page 173 but Morton or Rollins are considered fore-runners on Page 170.

The criticisms identified in this review are in fact relatively minor. This book is likely to succeed in both entertaining and instructing its readers. Dental students will find it valuable for review and those of us who teach and evaluate students in this field will obtain much useful material from it.

Reviewed by Dr. Colin Price, University of British Columbia

You Owe it to YOURSELF to Support the Canadian Dental Association

The Canadian Dental Association is a national forum for debate, discussion and ultimate resolution of the problems facing the profession in association with the Provinces.

It is a composite of its individual parts:

- Provincial Associations and Licensing bodies
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- les professeurs;
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- les étudiants;
- les sociétés affiliées.

Tout comme la profession se doit, dans l'intérêt du public, de pratiquer une médecine dentaire préventive et de lui épargner ainsi des restaurations coûteuses, ainsi devez-vous, dans votre propre intérêt et celui de la profession, appuyer votre organisation.

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Meet your CDA Board of Governors



N.A. Mancini
Chairman

Dr. N.A. Mancini

A chairman of the Board of Governors for both the CDA and Ontario Dental Association, Dr. Mancini is also a member of the Pierre Fauchard Academy of Dentistry and the Canadian Academy of Prosthodontics.

He graduated with a B.A. from the University of Toronto followed by a D.D.S. at the University of Buffalo, and now has a practice in Hamilton.

Married with three sons, Dr. Mancini has served on the Hamilton Civic Hospital Board, Hamilton Urban Renewal Committee, Ontario Separate School Trustees Association, Ontario School Trustees Council, and Dominion Council of Health.

Président du bureau des gouverneurs et de l'ADC et de l'*Ontario Dental Association*, le Dr Mancini est aussi membre de l'Académie Pierre Fauchard et de l'Académie canadienne de prosthodontie.

Il détient un baccalauréat ès arts de l'Université de Toronto et un doctorat en chirurgie dentaire de l'Université de Buffalo. Il pratique la profession à Hamilton.

Le Dr Mancini a rempli diverses fonctions au *Hamilton Civic Hospital*, au *Hamilton Urban Renewal Committee*, à l'*Ontario Separate School Trustees Association*, au *Ontario School Trustees Council* et au *Dominion Council of Health*. Il est marié et a trois fils.



Donald Williams
President

Dr. Donald Williams

Dr. Donald Williams, the new President of the Canadian Dental Association, was born in Saint John, New Brunswick and graduated from Dalhousie University in 1955. He served with the Royal Canadian Dental Corps from 1955-58 and has practised in Moncton ever since.

Dr. Williams has been active in several dental associations, including serving as secretary-treasurer for four years and president for one year of the Moncton Dental Society. For six years he was a council member on the New Brunswick Dental Society as well as executive council chairman for three years.

An active participant on the Canadian Dental Association's councils on ethics, dental materials and devices, hospital services and education, Dr. Williams represented the NBDS on the CDA Board of Governors for four years and sat on its Executive Council for two years.

He is a member of the Academy of General Dentistry, the Pierre Fauchard Academy and the Fédération dentaire internationale.

Le Dr Donald Williams, nouveau président de l'Association dentaire canadienne, est né à Saint-Jean (Nouveau-Brunswick) et a obtenu son diplôme de l'Université Dalhousie en 1955. Il a servi dans le Corps dentaire



W.R. Thompson
Pres.-elect

royal canadien de 1955 à 1958 et il pratique, depuis, à Moncton.

Le Dr Williams s'est occupé de plusieurs organismes dentaires, notamment la Société dentaire de Moncton, dont il a été le secrétaire-trésorier pendant quatre ans et le président pendant un an. Il a siégé au conseil de la Société dentaire du Nouveau-Brunswick pendant six ans et présidé son conseil exécutif pendant trois ans.

Il a participé activement aux travaux de plusieurs conseils de l'Association dentaire canadienne: déontologie, matériaux et appareils dentaires, services hospitaliers et éducation. Il a représenté le Nouveau-Brunswick au bureau des gouverneurs de l'ADC pendant quatre ans et siégé à son conseil exécutif pendant deux ans.

Le Dr Williams est membre de l'*Academy of General Dentistry*, de l'Académie Pierre Fauchard et de la Fédération dentaire internationale.

Brig.-Gen. W.R. Thompson

After serving during World War II as a dental assistant, Brig.-Gen. Thompson completed his dental education at the University of Toronto and became a Captain in the Royal Canadian Dental Corps. Since this time, he has been extensively involved with dental education.

A certified specialist in oral and maxillofacial surgery, Dr. Thompson has assumed various dental positions in the Canadian Armed Forces prior to being named Director General, Dental Services.

He has been a member of the Board of Governors of the Canadian Dental Association since 1976 and is President-Elect on its Executive Council. Dr. Thompson was recently awarded the Merit Award by the Fédération dentaire internationale, is Honorary Dental Surgeon to the Queen, Fellow

of the International College of Dentists and Honorary Fellow of the Royal College of Dentists of Canada.

In June 1981, he was appointed to the Order of Military Merit at the level of Commander.

Après avoir servi à titre d'assistant dentaire pendant la Deuxième Guerre mondiale, le brigadier-général Thompson a terminé ses études dentaires à l'Université de Toronto, puis a accepté un poste de capitaine dans le Corps dentaire royal canadien. Il s'est surtout occupé, depuis, de l'enseignement dentaire.

Spécialiste de la chirurgie buccale et maxillofaciale, le Dr Thompson a occupé divers postes dans les Forces armées canadiennes avant d'accéder à la direction générale des services dentaires.

Président élu du conseil exécutif, il fait partie du bureau des gouverneurs de l'Association dentaire canadienne depuis 1976. Le général Thompson s'est vu accorder récemment une distinction au mérite de la Fédération dentaire internationale. Il est chirurgien-dentiste honoraire de la reine, fellow du Collège international des dentistes et fellow honoraire du Collège royal des dentistes du Canada.

Au mois de juin 1981, il a été fait membre de l'Ordre du mérite militaire, avec le titre de commandeur.

Dr. Gil Utas

A Past-President of the Canadian Dental Association, Dr. Gil Utas is a graduate of the University of Alberta School of Dentistry and is in general practice in Grande Prairie, Alberta.

Dr. Utas is a Past-President of the Alberta Dental Association and has served on the CDA's Board of Governors since 1974. He is also a member of the Pierre Fauchard Academy and a Fellow of the International College of Dentists.

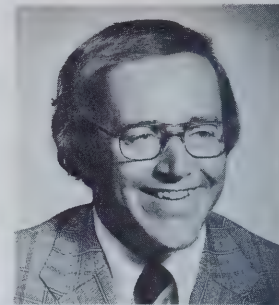
In Grande Prairie, Dr. Utas is a Past-President of the Shriners, a former chairman of the local school board and a member of the Chamber of Commerce. He is a past master of the Masonic Lodge, and is married with four children.



Gilbert Utas
Past president



Hubert-E. Drouin
Executive Director



Robert Hicks
British Columbia
Colombie britannique

Président sortant de l'Association dentaire canadienne, le Dr Gil Utas est diplômé de l'école de dentisterie de l'Université de l'Alberta et pratique la médecine dentaire à Grande Prairie (Alberta).

Ancien président de l'*Alberta Dental Association*, il siège au bureau des gouverneurs de l'ADC depuis 1974. Il est membre de l'Académie Pierre Fauchard et fellow du Collège international des dentistes.

À Grande Prairie, le Dr Utas a déjà présidé les Schriners, le conseil scolaire local et la loge maçonnique. Il est membre de la Chambre de commerce. Il est marié et a quatre enfants.

Hubert E. Drouin

The Executive Director of the Canadian Dental Association since the spring of 1979, Hubert Drouin received his education at St. Patrick's College in Ottawa and Ottawa Teachers' College.

In 1965, he joined Bell Canada in Cornwall — his birthplace — as commercial assistant, supervising representatives responsible for customer relations. He was promoted to manager of the business office after transferring to Ottawa in 1969.

Mr. Drouin joined the Canadian Lung Association in 1971 as executive secretary where he worked closely with committees of volunteers and the association's governing Board of Directors.

He is married and has one son.

Directeur général de l'Association dentaire canadienne depuis le printemps de 1979, M. Hubert Drouin a

fait ses études au collège S.-Patrice, d'Ottawa, et au *Ottawa Teachers' College*.

Il est entré au service de Bell Canada en 1965, à Cornwall — d'où il est originaire —, à titre d'adjoint commercial, responsable de l'équipe chargée de veiller aux relations avec la clientèle. Muté à Ottawa en 1969, il a été gérant du bureau d'affaires.

M. Drouin est ensuite passé, en 1971, au service de l'Association pulmonaire canadienne, à titre de secrétaire général, travaillant en étroite collaboration avec les comités de bénévoles et le conseil d'administration.

Il est marié et a un fils.

Dr. Robert Hicks

Past-President of the Vancouver and District Dental Society and College of Dental Surgeons of B.C., Dr. Robert Hicks is a member of the Canadian Dental Association's Board of Governors and Executive Council, and Chairman of the CDA's Taxation Committee.

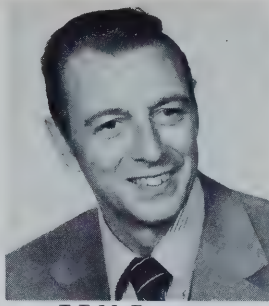
He is also President-Elect of the Canadian Association of Orthodontists and the Cancer Control Agency of B.C., as well as alderman for West Vancouver.

Dr. Hicks, who now operates a specialty practice in orthodontics in West Vancouver, graduated with a D.D.S. from the University of Alberta in 1962 and a M.Sc. with specialty in orthodontics in 1967.

Ancien président de la *Vancouver and District Dental Society* et du collège des chirurgiens-dentistes de la Colombie-britannique, le Dr Robert



M.J.R. Leitch
British Columbia
Colombie britannique



T.E.M. Ramage
British Columbia
Colombie britannique



D.L. Thompson
Alberta

Hicks fait partie du bureau des gouverneurs et du conseil exécutif de l'Association dentaire canadienne, et en préside le comité des questions fiscales.

Président-élu de l'Association canadienne d'orthodontie, il siège au *Cancer Control Agency of B.C.* et est échevin de Vancouver-Ouest.

Le Dr Hicks, qui a son propre cabinet d'orthodontie à Vancouver-Ouest, a reçu son diplôme de l'Université de l'Alberta en 1962 et obtenu une maîtrise en orthodontie en 1967.

Dr. M.J.R. Leitch

Born in Melfort, Saskatchewan, Dr. M.J.R. Leitch graduated with a B.A. from the University of Saskatchewan in 1950 and a B.D.S. from McGill University five years later. Since 1955, he has been in private practice in Kelowna, B.C.

Dr. Leitch has been active in various dental associations including past president, president and secretary of the Kelowna and District Dental Society, president and secretary for the Thompson Okanagan Dental Society, and representative for Thompson Okanagan Dental Society to the College of Dental Surgeons of B.C.

In 1978, he was elected to the College's Executive Council and two years later assumed the position of Vice-President of the College.

Originaire de Melfort (Saskatchewan), le Dr M.J.R. Leitch a obtenu son baccalauréat en 1950 de l'Université de Saskatchewan, puis son doc-

torat, cinq ans après, de l'Université McGill. Il pratique depuis 1955 à Kelowna (Colombie-Britannique).

Le Dr Leitch s'est occupé de divers organismes dentaires, à titre, entre autres, de président, président sortant et secrétaire de la *Kelowna and District Dental Society*, de président et secrétaire de la *Thompson Okanagan Dental Society*, et de représentant de celle-ci auprès du collège des chirurgiens-dentistes de la Colombie-Britannique.

En 1978, il était élu au conseil exécutif du collège et en a assumé la vice-présidence deux ans après.

Dr. T.E.M. Ramage

Dr. Thomas Ramage, married with two children, graduated from the University of Washington in 1958, at which time he opened a private practice in Vancouver, B.C.

Since 1963, he has held various executive positions on dental associations including director of the Vancouver and District Dental Society from 1963-65, secretary of the British Columbia Dental Association for one year, treasurer of the College of Dental Surgeons of B.C. for three years and vice-president of the College from 1976-79. Since this time he has acted as the College's president.

Dr. Ramage is a member of the Canadian Academy of Restorative Dentistry, American Academy of Gold Foil Operators and the Vancouver and District Dental Society. He holds a Fellowship in the International College of Dentists.

Le Dr Thomas Ramage a obtenu son diplôme de l'Université de Washington en 1958 et ouvrit aussitôt son propre cabinet à Vancouver (Colombie-Britannique).

Depuis 1963, il a occupé divers postes au sein d'organismes dentaires, notamment ceux de directeur de la *Vancouver and District Dental Society* (1963-1965) et de secrétaire pendant un an de la *British Columbia Dental Association*. Après en avoir été le trésorier pendant trois ans et vice-président de 1976 à 1979, il est actuellement président du collège des chirurgiens-dentistes de la Colombie-Britannique.

Le Dr Ramage fait partie de l'Académie canadienne de dentisterie restauratrice, de l'*American Academy of Gold Foil Operators* et de la *Vancouver and District Dental Society*. Il est aussi fellow du Collège international des dentistes.

Dr. D.L. Thompson

Born in Moose Jaw, Saskatchewan and a graduate of the Faculty of Dentistry, University of Toronto in 1950, Dr. D.L. Thompson served in the Royal Canadian Navy from 1942-45 and retired as Commanding Officer in 1961.

He served as President of the Calgary and District Dental Society and the Alberta Dental Association for one-year terms, and currently sits on the Executive Council and Board of Governors of the Canadian Dental Association.

Married with four children, Dr. Thompson is an honorary life member of the Southern Alberta Curling Association.

Originaire de Moose Jaw (Saskatchewan) et diplômé, en 1950, de la faculté de dentisterie de l'Université de Toronto, le Dr D.L. Thompson avait auparavant servi dans la marine royale canadienne de 1942 à 1945. Il avait le grade d'officier commandant lorsqu'il quitta celle-ci en 1961.

Ancien président de la *Calgary and District Dental Society* et de l'Association dentaire de l'Alberta, il siège

actuellement au conseil exécutif et au bureau des gouverneurs de l'Association dentaire canadienne.

Marié et père de quatre enfants, le Dr Thompson est membre honoraire à vie de la *Southern Alberta Curling Association*.

Dr. Robert D. Kinniburgh

Dr. Robert (Bob) Kinniburgh was born in Taber, Alberta and received his early education there before entering Gonzaga University in Spokane, Washington. He graduated from the School of Dentistry, Creighton University in Omaha, Nebraska in 1969.

Since then, he has practised in Lethbridge, Alberta.

Married with two children, Dr. Kinniburgh served on the Board of Directors of the Alberta Dental Association and is currently the association's vice-president.

Le Dr Robert (Bob) Kinniburgh est né et a fait ses études à Taber (Alberta), avant d'entrer à l'université Gonzaga, à Spokane (Washington). Il a reçu son diplôme en 1969 de la faculté de dentisterie de l'université Creighton, à Omaha (Nebraska).

Il pratique, depuis ce temps, à Lethbridge (Alberta).

Marié et père de deux enfants, le Dr Kinniburgh siège au conseil d'administration de l'*Alberta Dental Association* dont il est actuellement le vice-président.

Dr. John MacKay

A member of the Board of Governors of the Canadian Dental Association since 1976, Dr. MacKay operates a practice in Saskatoon, Saskatchewan.

He graduated with a B.A. from the University of Saskatchewan in 1950 prior to earning his dentistry degree at the University of Alberta in 1954.

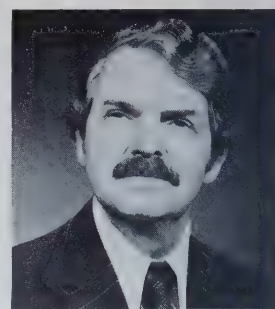
A council member and past president of the College of Dental Surgeons of Saskatchewan, Dr. MacKay has been past president and secretary of the Saskatoon Dental Society, member of the CDA Council on Dental Services and Council on Health Care and, for the past three years,



Robert D. Kinniburgh
Alberta



John Warren MacKay
Saskatchewan



P. Ralph Crawford
Manitoba

Chairman of Dental Services Committee of the Council on Health Care. He also has served on Executive Council.

Membre du bureau des gouverneurs de l'Association dentaire canadienne depuis 1976, le Dr John MacKay pratique la profession à Saskatoon (Saskatchewan).

Il a obtenu son baccalauréat en 1950 de l'Université de la Saskatchewan, puis son diplôme en médecine dentaire en 1954 de l'Université de l'Alberta.

Membre et ancien président du collège des chirurgiens-dentistes de la Saskatchewan, le Dr MacKay a aussi été président et secrétaire de la *Saskatoon Dental Society*, et membre du conseil des services de santé de l'ADC, dont il a présidé, au cours des trois dernières années, le comité des services dentaires.

Dr. P. Ralph Crawford

Formerly a theatre manager of Famous Players Canadian Corporation and lay minister of the United Church of Canada, Dr. Ralph Crawford holds a B.A. from the University of Ottawa and D.M.D. from the University of Manitoba.

Dr. Crawford was a clinical demonstrator part-time at the University of Manitoba from 1964-79, and now operates a general practice in Winnipeg, which has been limited to removable prosthodontics since 1978.

A member of the Manitoba Dental Association, Dr. Crawford is currently chairman of the MDA Legislation Committee, and is an executive member of the Canadian Association of Prosthodontists, associate mem-

ber of the American Academy of Implant Dentistry, President-Elect of the Alumni Association, University of Manitoba and member of the Winnipeg Rotary Club.

Ancien gérant de cinéma de la société canadienne Famous Players et ministre laïque de l'Église unie du Canada, le Dr Ralph Crawford a un baccalauréat de l'Université d'Ottawa et un doctorat en médecine dentaire de l'Université du Manitoba.

De 1964 à 1979, il a fait de la démonstration en clinique à temps partiel à l'Université du Manitoba. Il a son propre cabinet de pratique générale à Winnipeg, mais il se consacre exclusivement à la prosthodontie depuis 1978.

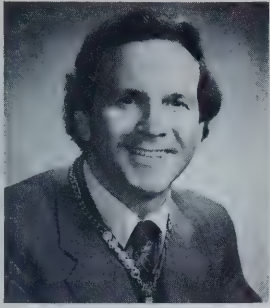
Membre de la *Manitoba Dental Association*, le Dr Crawford en préside actuellement le comité de législation. Il fait partie de l'exécutif de l'Association canadienne de prosthodontie et est membre associé de l'*American Academy of Implant Dentistry*. Président élu de l'Association des anciens de l'Université du Manitoba, il fait aussi partie du Club Rotary de Winnipeg.

Dr. Bradley W. Holmes

A graduate of the University of Toronto in 1965, Dr. Bradley Holmes interned at the Michael Reese Hospital and Medical Centre in Chicago the following year. He practised dentistry as an associate with Dr. A. Schwartz from 1966-1970.

Since 1970 Dr. Holmes has operated a private practice in Kenora.

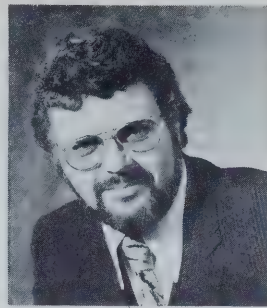
Formerly president of the Ontario Dental Association for the 1980-81



Bradley W. Holmes
Ontario



R.R. Schiewe
Ontario



Gary E. Pitkin
Ontario



Kevin L. Roach
Ontario

term, he is currently on the Board of Governors of the Canadian Dental Association, and a member of the Kenora Rainy River Dental Society, Winnipeg Dental Society, Ontario Dental Association and the Pierre Fauchard Academy.

He is married with two children.

Diplômé de l'Université de Toronto en 1965, le Dr Bradley Holmes a fait une année d'internat au *Michael Reese Hospital and Medical Centre*, de Chicago. Il a ensuite pratiqué la médecine dentaire en association avec le Dr A. Schwartz de 1966 à 1970, après quoi il a ouvert son propre cabinet à Kenora (Ontario).

Ancien président de l'*Ontario Dental Association* (1980-1981), il siège actuellement au bureau des gouverneurs de l'Association dentaire canadienne. Il est membre de la *Kenora Rainy River Dental Society*, de la *Winnipeg Dental Society*, de l'*Ontario Dental Society* et de l'Académie Pierre Fauchard.

Il est marié et a deux enfants.

Dr. R.R. Schiewe

Dr. Bob Schiewe, the president of the Ontario Dental Association this year, graduated in dentistry from the University of Toronto in 1963, followed by a two-year teaching fellowship in oral surgery at the University of Manitoba.

He obtained his BScD degree in anaesthesia from U of T in 1967 and has been in private practice in Thunder Bay since.

Extremely active in dentistry, Dr. Schiewe has held offices on the Thunder Bay Dental Association, is in his fourth year of service on the

ODA's Executive Council, and has been one of the Association's Governors on the Board of the Canadian Dental Association.

Président actuel de l'*Ontario Dental Association*, le Dr Bob Schiewe a obtenu son diplôme en dentisterie de l'Université de Toronto en 1963, après quoi il a fait deux années d'enseignement et d'études en chirurgie buccale à l'Université du Manitoba.

Il a obtenu un BScD en anesthésie de l'Université de Toronto en 1967 et pratique depuis la profession à Thunder Bay.

Participant activement aux activités de la profession, le Dr Schiewe a occupé divers postes à la *Thunder Bay Dental Association*. Il fait partie de l'exécutif de l'ODA depuis quatre ans et a représenté l'association au bureau des gouverneurs de l'Association dentaire canadienne.

Dr. Gary Pitkin

Dr. Gary Pitkin, a 1966 graduate of the University of Toronto, has practised in Scarborough, Ontario since graduation and has been involved in dental associations since 1974.

He was President of the East Toronto Dental Society that year, a member of the Ontario Dental Association's Board of Governors from 1975-81, a member of its Executive Council from 1977-81, ODA President in 1980, and a member of the Canadian Dental Association's Board of Governors since 1974. He is currently Ontario's representative on the Board.

Diplômé de l'Université de Toronto en 1966, le Dr Gary Pitkin prati-

que, depuis, à Scarborough (Ontario) et s'occupe d'associations dentaires depuis 1974, année où il a présidé l'*East Toronto Dental Society*.

Il a siégé du bureau des gouverneurs de l'*Ontario Dental Association* de 1975 à 1981 et il représente actuellement l'Ontario au bureau des gouverneurs de l'Association dentaire canadienne, où il siège depuis 1974.

Dr. Kevin L. Roach

Dr. Kevin Roach, who was re-elected in May 1981 to the Canadian Dental Association's Board of Governors, is also on the Executive Council, Education Committee and Dental Prepayment Advisory Committee of the Ontario Dental Association.

He has served as student governor and a member of the Board of Governors of the ODA in the past.

A graduate from the University of Toronto in 1973, Dr. Roach has served as President of the Renfrew County Dental Society, Chairman of Pembroke Citizens Fluoridation Committee, and past Director of the Pembroke Kinsmen Club.

Réélu au mois de mai 1981 au bureau des gouverneurs de l'Association dentaire canadienne, le Dr Kevin Roach siège également au conseil exécutif, au comité de l'éducation et au comité consultatif sur les services payés d'avance de l'*Ontario Dental Association*.

Il a déjà siégé au bureau des gouverneurs de l'ODA, à titre de dentiste et à titre d'étudiant.

Diplômé de l'Université de Toronto (1973), il a déjà présidé la *Renfrew*

County Dental Society et le *Pembroke Citizens Fluoridation Committee*, en outre d'avoir siégé au conseil du Club Kinsmen de Pembroke.

Dr. Edward George Sonley

Presently a member of the Canadian Dental Association's Board of Governors, Dr. Edward Sonley graduated with honors and several awards from the University of Toronto, Faculty of Dentistry, in 1956. Since 1957 he has operated a private practice in Willowdale, Ontario.

An Associate Professor at U. of T. since April 1981, Dr. Sonley has been active in a number of dental associations. His present committee activities include member of Council and Executive for the Council of Health with the Ontario Ministry of Health, chairman of the Committee on Human Resources for the same ministry, and President-Elect of the Toronto Dentistry for Children Study Club.

He is currently a member of the East Toronto Dental Society, Ontario Dental Association, Canadian Dental Association, Pierre Fauchard Academy, Andy Anderson Study Club, and Toronto Dentistry for Children Study Club.

Siégeant actuellement au bureau des gouverneurs de l'Association dentaire canadienne, le Dr Edward Sonley a reçu, en 1956, son diplôme avec distinction et remporté plusieurs trophées de la faculté de dentisterie de l'Université de Toronto. Il a ouvert son propre cabinet en 1957 à Willowdale (Ontario).

Professeur associé à l'Université de Toronto depuis le mois d'avril 1981, il s'est occupé activement de plusieurs organismes dentaires. Il siège actuellement, à titre de conseiller et de membre de l'exécutif, au conseil de la santé du Ministère de la santé de l'Ontario, dont il préside également le comité des ressources humaines. Il est également président élu du *Toronto Dentistry for Children Study Club*.

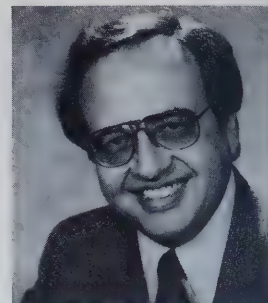
Il fait aussi partie de la *East Toronto Dental Society*, de l'*Ontario Dental Association*, de l'*Association*



Edward George Sonley
Ontario



Jean Laporte
Québec



Irwin Margolese
Québec

Dentaire canadienne, de l'Académie Pierre Fauchard, du *Andy Anderson Study Club* et du *Toronto Dentistry for Children Study Club*.

Dr. Jean Laporte

Recently re-elected to the Canadian Dental Association Executive Council for another term, Dr. Jean Laporte has held several positions with CDA including that of member of the Board of Governors, and Executive Liaison Officer on the Council on Information Services and the Council on Insurance and Investment.

He graduated from the University of Montreal with a B.A. in 1959 and a doctorate in dental surgery in 1964, and now has a private practice in Quebec City.

Dr. Laporte is Founding President of the Dental Analgesia Society of Eastern Quebec.

Réélu récemment au conseil exécutif de l'Association dentaire canadienne, le Dr Jean Laporte a occupé plusieurs postes au sein de l'ADC, notamment à titre de membre du bureau des gouverneurs, d'agent de liaison au niveau de l'exécutif auprès du conseil des services d'information et du conseil des assurances et de l'investissement.

Il détient un baccalauréat ès art de l'Université de Montréal (1959) et un doctorat en chirurgie dentaire (1964). Il a son cabinet de pratique à Québec.

Le Dr Laporte est aussi le président fondateur de la Société d'analgésie dentaire de l'Est du Québec.

Dr. Irwin Margolese

Dr. Irwin Margolese, a graduate from McGill University's Faculty of Dentistry in 1961, entered a post-graduate internship program for one year at the Albert Einstein Medical Center in Philadelphia prior to opening a private practice in Montreal, Quebec in 1962.

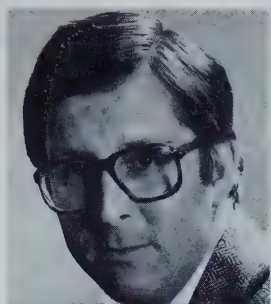
Since this time he has held numerous positions in many dental associations. Presently, Dr. Margolese is administrator of the Quebec Dental Surgeons Association, corresponding secretary for the Mount Royal Dental Society, vice-president and director of continuing education of the Canadian Analgesia Society Section 9, member of the board of directors for Les Journées Dentaires du Québec, and clinical teaching assistant in the department of operative dentistry at the Jewish General Hospital.

Diplômé de la faculté de dentisterie de l'université McGill en 1961, le Dr Irwin Margolese a fait un an d'internat post-universitaire au *Albert Einstein Medical Center* de Philadelphie, avant d'ouvrir son propre cabinet en 1962, à Montréal (Québec).

Il a, depuis, occupé divers postes dans plusieurs organismes dentaires. Actuellement, le Dr Margolese est un des administrateurs de l'Association des chirurgiens-dentistes du Québec; il est secrétaire correspondant de la Société dentaire Mont-Royal, vice-président et directeur de la formation continue à la Société canadienne d'analgésie (section 9), membre du conseil d'administration des Journées



Robert A. Turcotte
New Brunswick
Nouveau-Brunswick



John S. Christie
Nova Scotia
Nouvelle-Écosse



J.R. Robertson
Prince Edward Island
Île du Prince Édouard

dentaires du Québec et assistant professeur en clinique au département de chirurgie dentaire de l'Hôpital général juif.

Dr. Robert A. Turcotte

A graduate of McGill University with a B.Sc. in 1970 and a D.D.S. two years later, Dr. Robert Turcotte has operated a private practice in St. John, New Brunswick since 1972. For the past four years he has been a part-time dental surgeon at Centracare Saint John Inc.

Dr. Turcotte is presently a board member of the New Brunswick Dental Society, President-Elect and chairman of the Management Committee of N.B.D.S., charter member of the Fundy Dental Seminar Study Club and member of the Saint John Dental Society.

Le Dr Robert Turcotte détient un baccalauréat en sciences de l'Université McGill où il a obtenu son doctorat en médecine dentaire en 1972. Il pratique, depuis, à Saint-Jean (Nouveau-Brunswick). Depuis quatre ans, il fait de la chirurgie dentaire à temps partiel au Centracare de Saint-Jean.

Le Dr Turcotte siège actuellement au conseil de la Société dentaire du Nouveau-Brunswick dont il est le président-élu et dont il préside aussi le comité de gestion. Il est membre originaire du *Fundy Dental Seminar Study Club* et membre de la Société dentaire de Saint-Jean.

Dr. John S. Christie

Since graduating from Dalhousie with a D.D.S. in 1971, Dr. John

Christie has operated a private practice in Bedford, Nova Scotia.

He has been a part-time staff member specializing in operative dentistry on Dalhousie's Faculty of Dentistry since 1972, is on the clinical staff of the Nova Scotia Institute of Technology, and is a member of the NSIT Advisory Committee for the dental assisting program.

Dr. Christie has also held numerous positions on the dental associations including president-elect, president, past-president and, currently, executive member of the Nova Scotia Dental Association, member and chairman of the Dental Care Systems Committee until 1977, and on the Board of Governors for CDA since 1980.

Après avoir reçu son doctorat en médecine dentaire de l'université Dalhousie en 1971, le Dr John Christie a ouvert son propre cabinet à Bedford (Nouvelle-Ecosse), où il pratique depuis ce temps.

Depuis 1972, il fait partie du personnel à temps partiel de la faculté de dentisterie de l'Université Dalhousie, à titre de spécialiste en chirurgie dentaire. Il fait aussi partie de l'effectif clinique du *Nova Scotia Institute of Technology* où il siège également au comité consultatif en ce qui a trait au programme de formation des assistants dentaires.

Le Dr Christie a aussi occupé divers postes dans les organismes dentaires, à titre notamment de président élu, de président, de président sortant et, actuellement, de membre de l'exécutif

de la *Nova Scotia Dental Association*, où il a présidé jusqu'en 1977 le comité des régimes de soins dentaires. Il siège au bureau des gouverneurs de l'ADC depuis 1980.

Dr. J.R. Robertson

Dr. J.R. Robertson of Summerside, P.E.I. worked with the Royal Canadian Dental Corps until 1969 after graduating from Dalhousie University in 1964. Upon retirement, he established a private practice in Summerside where he resides with his wife and three children.

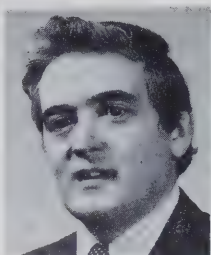
Currently, Dr. Robertson is a member of the Summerside Presbyterian Church, Fellow of the International College of Dentists (Canada), and member of the American College of Dentists, U.S. Dental Institute and Green Gables Study Club.

He was past president of the P.E.I. Dental Association, on the Advisory Board of Holland College's dental assisting program and Prince County Hospital, and the chairman of the Children's Dental Care Plan.

Diplômé de l'Université Dalhousie en 1964, le Dr J.R. Robertson, de Summerside (Île du Prince-Édouard), a servi dans le Corps dentaire royal canadien jusqu'en 1969, après quoi il a ouvert son propre cabinet à Summerside, où il demeure avec sa femme et leurs trois enfants.

Le Dr Robertson est membre de l'Église presbytérienne de Summerside. Fellow du Collège international des dentistes (Canada), il fait également partie de l'*American College of Dentists*, du *U.S. Dental Institute* et du *Green Gable Study Club*.

Ancien président de l'Association dentaire de l'Î. P.-É., il a déjà siégé au conseil consultatif du *Holland College*, pour ce qui est du programme de formation des assistants dentaires, et à celui du *Prince County Hospital*, en outre d'assumer la présidence du conseil d'administration du régime de soins dentaires pour les enfants.



R.D. Sexton
Newfoundland
Terre-Neuve

Dr. R.D. Sexton

A graduate in electrical engineering from the University of Waterloo and in dentistry from Dalhousie in 1968, Dr. Sexton is presently in general practice in Corner Brook, Newfoundland.

He has served in various capacities with the Newfoundland Dental Association during the past 13 years and the CDA, and is Chief of the Dental Surgical Department at Western Memorial Regional Hospital.

Dr. Sexton is married with five children.

Diplômé en génie électrique de l'Université de Waterloo, puis en médecine dentaire de l'Université Dalhousie (1968), le Dr Sexton pratique actuellement la profession à Corner Brook (Terre-Neuve).

Il a occupé, au cours des 13 dernières années, divers postes à la *Newfoundland Dental Association* et à l'ADC. Il est chef du département de chirurgie dentaire au *Western Memorial Regional Hospital*.

Rita Hurley

A 1981 Graduates' Society Student Award recipient, Rita Hurley graduated with a B.A. in biology from UCLA in 1974 and a M.Sc. from McGill University in 1977. She is currently studying for a D.D.S. at McGill.

Since 1964 Ms. Hurley has been actively involved in student affairs. She is presently Student Representative for the Canadian Dental Association, as well as Student Governor to the Board of Governors, member of the Council on Student Affairs and



Rita Hurley
Student
Étudiante



James N. Wright
Dep. Nat'l. Defence
Dép. Defence National

student member of the Council on Education for the CDA.

Récipiendaire 1981 du prix de la Société des diplômés, Rita Hurley a obtenu un baccalauréat en biologie de l'UCLA en 1974 et, en 1977, une maîtrise en sciences de l'Université McGill où elle poursuit ses études en médecine dentaire.

Mlle Hurley s'occupe activement des affaires étudiantes depuis 1964. Elle représente actuellement les étudiants auprès de l'Association dentaire canadienne et, à ce titre, siège au bureau des gouverneurs, au conseil des affaires étudiantes et au conseil de l'éducation.

James N. Wright

A graduate of the University of Alberta School of Dentistry and a certified specialist in periodontics, Col. Wright has been closely allied with dental education and organized dentistry during his military career.

He has served as Base Dental Officer, Senior Dental Adviser to the United Nations Emergency Force in the Middle East and Special Projects Officer for the Director General of Dental Services.

Col. Wright is currently Director General of Dental Treatment Services for the Department of National Defence in Ottawa. He represents Canadian Forces Dental Services as a member of the CDA Board of Governors.

He is also a Fellow of the International College of Dentists and Honorary Dental Surgeon to the Queen.

Diplômé de l'école de dentisterie de l'Université de l'Alberta et spécialiste



J.C. Tsafaroff
Veterans Affairs
Min. Anc. Combattants

reconnu en périodontie, le colonel Wright a été étroitement associé à l'enseignement de la médecine dentaire et à l'organisation de la profession, au cours de sa carrière militaire.

Il a servi à titre d'officier dentaire, de conseiller dentaire principal auprès des Forces d'urgence des Nations Unies au Moyen-Orient et de chargé des projets spéciaux auprès du directeur général des services dentaires.

Le colonel Wright est actuellement directeur général des Services de traitement dentaire au Ministère de la défense nationale, à Ottawa. Il représente les services dentaires des forces canadiennes au bureau des gouverneurs de l'Association dentaire canadienne.

Il est fellow du Collège international des dentistes et chirurgien-dentiste honoraire de la Reine.

Dr. J.C. Tsafaroff

A graduate of the Faculty of Dentistry at University of Toronto in 1965 and holder of a Dental Public Health Diploma from the same school in 1978, Dr. Tsafaroff is presently a departmental dental services adviser with Veterans Affairs in Toronto.

He is also a part-time instructor at the University of Toronto and regional dental officer of the Ontario region for Veterans Affairs. From 1965-71, Dr. Tsafaroff operated a private practice in Toronto.

Le Dr Tsafaroff a obtenu, de l'Université de Toronto, un diplôme en médecine dentaire (1965) et un diplôme en hygiène publique (1978). Il est actuellement conseiller dentaire auprès du ministère des Anciens combattants, à Toronto.

Il enseigne à temps partiel à l'Université de Toronto et est chargé des services dentaires de la région de l'Ontario au ministère des Anciens combattants. Il a fait de la pratique privée à Toronto, de 1965 à 1971.

Health and Welfare Canada dental consultant to be named.

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Adresse _____

Ville _____ Prov. _____ Code postal _____

Diplôme _____

N-CDJ-8

Imbattable la vie dans les Forces!

Complete CDA financial statement presented

In 1979 summary financial statements for the Association were presented in the Journal for the first time. We have extended this report to present the complete financial statements.

The financial report of both the Canadian Dental Association and the Canadian Dental Research Foundation were presented and approved by the Board of Governors at its interim meeting, March 5-6 in Ottawa.

These financial statements reflect the healthy state of your Association, the tremendous support that you have provided and the dedication of able management.

For several years prior to 1980, the Association budgeted for and experienced large excesses of expenses over revenue. In 1979 the decision was approved to increase fees to members which resulted in an increase in revenue of \$308,599.

This, together with significant improvements in advertising and rental revenue, increased total revenue by \$446,109 to \$1,752,024. During the same period, increases in total expenses were held to \$106,835 with the end result that the Association produced an excess of revenue over expenses for the year of \$45,234, a significant improvement over the deficit of the previous year.

At December 31, 1980 the accumulated surplus was \$659,962. We wish to emphasize that this surplus does not reflect the Association's cash position, but reflects the equity in the CDA Headquarters building of \$921,630, less the working capital deficiency of \$261,668.

The Executive Council wishes to express its appreciation for your continued support of *your* Association and believes the following statements will provide you with a full account of the stewardship of your funds.

Hubert Drouin
Executive Director

Auditors' Report

To the Members,
Canadian Dental Association,

We have examined the balance sheet of the Canadian Dental Association as at December 31, 1980 and the statements of revenue and expenses and surplus, revenue and expenses and surplus for the Library Trust Fund and the Grieve Memorial Lectureship Fund and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in

the circumstances.

In our opinion, these financial statements present fairly the financial position of the Association as at December 31, 1980 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

The comparative figures are based upon financial statements which were reported on by other auditors, and

accordingly we do not express an opinion on them.

McCay Duff & Company

Chartered Accountants,

Ottawa, Ontario,
January 15, 1981.

Financial statement

BALANCE SHEET AS AT DECEMBER 31, 1980

ASSETS		
	1980	1979
Current		
Cash	\$ 91,937	\$ 44,410
Deposit certificate	150,000	—
Accounts receivable	101,795	75,582
Inventory (note 1)	31,973	18,613
Prepaid expenses	17,173	25,670
	<u>392,878</u>	<u>164,275</u>
Fixed (notes 1 and 2)	1,375,359	1,384,420
	<u>1,768,237</u>	<u>1,548,695</u>
TRUST ASSETS		
Cash	53,481	44,745
Deposit certificates	5,343	5,343
Accounts receivable	26	1,920
Due from Canadian Dental Association	847	5,207
Library books and furniture (at cost less accumulated depreciation of \$29,423)	3,339	3,136
	<u>63,036</u>	<u>60,351</u>
	<u>\$1,831,273</u>	<u>\$1,609,046</u>
LIABILITIES		
Current		
Accounts payable	\$ 73,255	\$ 105,377
Deferred revenue	574,444	357,410
Due to Trust Funds	847	5,207
Current portion of long term debt	6,000	6,618
	<u>654,546</u>	<u>474,612</u>
Long Term Debt (note 3)	453,729	459,355
SURPLUS		
Surplus	659,962	614,728
	<u>1,768,237</u>	<u>1,548,695</u>

TRUST LIABILITIES

Accounts payable	300	750
Library Trust Fund	56,666	53,536
The Grieve Memorial Lectureship Fund	6,070	6,065
	<u>63,036</u>	<u>60,351</u>
	<u>\$1,831,273</u>	<u>\$1,609,046</u>

STATEMENT OF REVENUE AND EXPENSES AND SURPLUS

FOR THE YEAR ENDED DECEMBER 31, 1980

	1980		1979
	Budget	Actual	Actual
Revenue			
Fees	\$1,205,625	\$1,237,806	\$ 929,207
Grants	28,500	44,326	23,524
Advertising	212,700	285,120	196,397
Publications	25,000	40,594	32,694
Interest	16,000	19,754	25,084
Rental	104,000	107,021	87,898
Other	12,500	17,403	11,111
	<u>1,604,325</u>	<u>1,752,024</u>	<u>1,305,915</u>
Expenses			
Honoraria and per diem	150,000	155,145	156,339
Salaries and benefits	420,000	408,764	393,767
General and administration	226,700	245,569	264,364
Conferences	22,500	30,946	15,300
Journal	319,050	334,594	265,647
Other publications	52,000	42,489	42,933
Travel and meetings	219,200	231,294	218,312
Property management	212,240	194,717	172,166
Dental Health Month	12,000	13,510	10,419
Accreditation surveys	19,200	24,275	31,048
Dental Aptitude Program	32,600	25,487	29,660
	<u>1,685,490</u>	<u>1,706,790</u>	<u>1,599,955</u>
Excess of revenue over expenses (expenses over revenue)	(81,165)	45,234	(294,040)
for the year			
Surplus — beginning of year	614,728	614,728	908,768
Surplus — end of year	<u>\$ 533,563</u>	<u>\$ 659,962</u>	<u>\$ 614,728</u>

APPROVED BY THE CDA BOARD OF GOVERNORS
MARCH 1981

**STATEMENT OF CHANGES IN
FINANCIAL POSITION FOR THE YEAR ENDED
DECEMBER 31, 1980**

	1980	1979
Source of Funds		
Operations		
Excess of revenue over expenses for the year	\$ 45,234	\$ —
Item not requiring working capital — depreciation	44,688	—
	<u>89,922</u>	<u>—</u>
Application of Funds		
Operations		
Excess of expenses over revenue for the year	—	294,040
Item not requiring working capital — depreciation	—	44,687
	<u>—</u>	<u>249,353</u>
Purchase of fixed assets	35,627	17,015
Reduction of long term debt	5,626	7,712
	<u>41,253</u>	<u>274,080</u>
Increase (decrease) in working capital	48,669	(274,080)
Working capital (deficiency) — beginning of year	(310,337)	(36,257)
Working capital (deficiency) — End of year	<u>(\$261,668)</u>	<u>(\$310,337)</u>

LIBRARY TRUST FUND

**STATEMENT OF REVENUE AND EXPENSES
AND SURPLUS FOR THE YEAR ENDED
DECEMBER 31, 1980**

	1980	1979
Revenue		
Interest	\$ 4,760	\$ 3,637
Expenses		
Binding	164	93
Depreciation	774	529
Subscriptions	692	162
	<u>1,630</u>	<u>784</u>
Excess of revenue over expenses — for the year	3,130	2,853
Surplus — beginning of year	53,536	50,683
Surplus — end of year	<u>\$56,666</u>	<u>\$53,536</u>

**NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 1980**

1. Significant Accounting Policies

(a) Inventory

Inventory is stated at the lower of cost and net realizable value.

(b) Depreciation

Furniture and equipment purchased subsequent to January 1, 1979 are expensed when acquired.

Depreciation is provided on the straight line basis as follows:

Building	— 40 years
Building improvements	— 5 years
Furniture and equipment	— 10 years

(c) Revenue Recognition

Membership fees and subscriptions to the Journal are recognized as revenue in the year to which they apply. Grants are recognized as revenue when received.

2. Fixed Assets

	1980			1979
	Cost	Accum. Depr'n.	Net	Net
Land	\$ 82,915	\$ —	\$ 82,915	\$ 82,915
Building	1,376,435	168,723	1,207,712	1,242,123
Building improvements	49,132	5,402	43,730	10,804
Furniture and equipment	88,309	47,307	41,002	48,578
	<u>\$1,596,791</u>	<u>\$221,432</u>	<u>\$1,375,359</u>	<u>\$1,384,420</u>

3. Long Term Debt

	1980	1979
Mortgage	\$459,729	\$465,973
Current portion	6,000	6,618
	<u>\$453,729</u>	<u>\$459,355</u>

The mortgage is renewable annually and currently bears interest at 13.25% per annum.

THE GRIEVE MEMORIAL LECTURESHIP FUND

**STATEMENT OF REVENUE AND EXPENSE
AND SURPLUS FOR THE YEAR ENDED
DECEMBER 31, 1980**

	1980	1979
Revenue		
Interest	\$ 305	\$ 300
Expense		
Grant to the Orthodontic section of the Canadian Dental Association	300	300
Excess of revenue over expense for the year	5	—
Surplus — beginning of year	6,065	6,065
Surplus — end of year	<u>\$6,070</u>	<u>\$6,065</u>

Le bilan de l'exercice de 1980

En 1979, le Journal publiait pour la première fois un sommaire du bilan de l'Association. Cette année, il le présente en entier.

Les rapports du vérificateur concernant l'Association dentaire canadienne et le Fonds de recherche en médecine dentaire ont été approuvés par le bureau des gouverneurs, à sa réunion intérimaire des 5 et 6 mars qui a eu lieu à Ottawa.

Les deux bilans indiquent que votre association est en bonne santé, attestent de l'appui formidable que vous lui avez apporté et témoignent du dévouement et la compétence de la direction.

Avant 1980, l'Association avait pendant plusieurs années accusé d'importants déficits qui étaient d'ailleurs prévus au budget. Diverses mesures prises depuis ont transformé ce déficit annuel en surplus.

D'abord, la hausse des cotisations, approuvée en 1979, a permis d'accroître le revenu à ce chapitre de 308 599 \$. Ensuite, les recettes de la publicité et des loyers ont permis d'accroître le revenu global de 446 109 \$ pour le porter à 1 752 024 \$.

D'autre part, l'augmentation des dépenses a été limitée à 1 06 835 \$ pour finalement réaliser, au cours de l'année, un surplus de 45 234 \$.

Au 31 décembre 1980, le surplus accumulé s'élevait à 659 962 \$. Il importe de souligner cependant que celui-ci n'indique pas les liquidités de l'association mais plutôt l'écart entre l'équité de 921 630 \$ sur la propriété du siège social de l'ADC et le déficit du fonds de roulement, qui est de 261 668 \$.

Le conseil exécutif vous remercie de l'appui que vous continuez à apporter à votre association. Il croit que le bilan que voici rend compte en entier de la gestion de vos fonds.

*Le directeur général,
Hubert Drouin*

Rapport des vérificateurs

Aux membres de
L'Association dentaire canadienne.

Nous avons vérifié le bilan de l'Association dentaire canadienne au 31 décembre 1980 ainsi que l'état des résultats, l'état des bénéfices non répartis, les états des résultats et du surplus des fonds en fiducie pour la bibliothèque et le fonds "Grieve Memorial Lectureship" et l'état de l'évolution de la situation financière de l'exercice terminé à cette date. Notre vérification a été effectuée conformément aux normes de vérification généralement reconnues, et a comporté par conséquent les son-

dages et autres procédés que nous avons jugés nécessaires dans les circonstances.

A notre avis, ces états financiers présentent fidèlement la situation financière de la compagnie au 31 décembre 1980 ainsi que les résultats de son exploitation et l'évolution de sa situation financière pour l'exercice terminé à cette date selon les principes comptables généralement reconnus, appliqués de la même manière qu'au cours de l'exercice précédent.

Les chiffres correspondants étant

basés sur des états financiers préparés par d'autres vérificateurs, nous n'exprimons pas d'opinion sur ceux-ci.

McCay, Duff & Company

Comptables agréés.

Ottawa, Ontario
le 15 janvier 1981.

**L'ASSOCIATION DENTAIRE CANADIENNE
BILAN AU 31 DÉCEMBRE 1980**

	ACTIF	
	1980	1979
Actif à court terme		
Encaisse	\$ 91,937	\$ 44,410
Certificats de dépôt	150,000	—
Comptes débiteurs	101,795	75,582
Stocks (note 1)	31,973	18,613
Frais payés d'avance	17,173	25,670
	<u>392,878</u>	<u>164,275</u>
Actif Immobilisé (notes 1 et 2)	1,375,359	1,384,420
	<u>1,768,237</u>	<u>1,548,695</u>

ACTIFS DU FONDS EN FIDUCIE

Encaisse	53,481	44,745
Certificats de dépôt	5,343	5,343
Comptes débiteurs	26	1,920
Payable à l'Association dentaire canadienne	847	5,207
Livres de la bibliothèque et mobilier (coût moins amortissement de \$29,423)	3,339	3,136
	<u>63,036</u>	<u>60,351</u>
	<u>\$1,831,273</u>	<u>\$1,609,046</u>

PASSIF

Passif à court terme		
Comptes créditeurs	\$ 73,255	\$ 105,377
Revenu reporté	574,444	357,410
Payable aux fonds en fiducie	847	5,207
Partie courante de la dette à long terme	6,000	6,618
	<u>654,546</u>	<u>474,612</u>
Dette à long terme (note 3)	453,729	459,355

SURPLUS

Surplus	659,962	614,728
	<u>1,768,237</u>	<u>1,548,695</u>

PASSIFS DU FONDS EN FIDUCIE

Comptes créditeurs	300	750
Fonds en fiducie pour la bibliothèque	56,666	53,536
Le fonds "Grieve Memorial Lectureship"	6,070	6,065
	<u>63,036</u>	<u>60,351</u>
	<u>\$1,831,273</u>	<u>\$1,609,046</u>

**ÉTAT DES RÉSULTATS ET DU SURPLUS POUR
L'EXERCICE SE TERMINANT LE 31 DÉCEMBRE 1980**

	1980		1979
	Budget	Réel	Réel
Revenus			
Cotisations	\$1,205,625	\$1,237,806	\$ 929,207
Dons	28,500	44,326	23,524
Publicité	212,700	285,120	196,397
Publications	25,000	40,594	32,694
Intérêts	16,000	19,754	25,084
Location	104,000	107,021	87,898
Autre	12,500	17,403	11,111
	<u>1,604,325</u>	<u>1,752,024</u>	<u>1,305,915</u>

Charges

Honoraires et indemnités quotidiennes	150,000	155,145	156,339
Salaires et avantages	420,000	408,764	393,767
Frais généraux et administratifs	226,700	245,569	264,364
Conférences	22,500	30,946	15,300
Journal	319,050	334,594	265,647
Autres publications	52,000	42,489	42,933
Frais de voyage et réunions	219,200	231,294	218,312
Gestion d'immeubles	212,240	194,217	172,166
Le mois de la santé dentaire	12,000	13,510	10,419
Les visites d'agrément	19,200	24,275	31,048
Le programme du test d'aptitudes dentaires	32,600	25,487	29,660
	<u>1,685,490</u>	<u>1,706,790</u>	<u>1,599,955</u>

Excédant des revenus sur les charges (charges sur les revenus) pour l'exercice	(81,165)	45,234	(294,040)
Surplus au début de l'exercice	<u>614,728</u>	<u>614,728</u>	<u>908,768</u>
Surplus à la fin de l'exercice	<u>\$ 533,563</u>	<u>\$ 659,962</u>	<u>\$ 614,728</u>

**APPROUVÉ PAR LE BUREAU DES GOUVERNEURS DE L'ADC
MARS 1981**

ÉTAT DE L'ÉVOLUTION DE LA SITUATION FINANCIÈRE POUR L'EXERCICE SE TERMINANT LE 31 DÉCEMBRE 1980

	1980	1979
Provenance du fonds de roulement		
Opérations		
Excédant des revenus sur les charges pour l'exercice	\$ 45,234	\$ —
Item n'impliquant aucune sortie de fonds — amortissement	44,688	—
	89,922	—
Utilisation du fonds de roulement		
Opérations		
Excédant des charges sur les revenus pour l'exercice	—	294,040
Item n'impliquant aucune sortie de fonds — amortissement	—	44,687
	—	249,353
Acquisition d'actifs immobilisés	35,627	17,015
Versements sur dette à long terme	5,626	7,712
	41,253	274,080
Augmentation (diminution) du fonds de roulement	48,669	(274,080)
Fonds de roulement (déficitaire) au début de l'exercice	(310,337)	(36,257)
Fonds de roulement (déficitaire) à la fin de l'exercice	(\$261,668)	(\$310,337)

FONDS EN FIDUCIE POUR LA BIBLIOTHÈQUE

ÉTAT DES RÉSULTATS ET DU SURPLUS POUR L'EXERCICE SE TERMINANT LE 31 DÉCEMBRE 1980

	1980	1979
Revenus		
Intérêts	\$ 4,760	\$ 3,637
Charges		
Reliure	164	93
Amortissement	774	529
Abonnements	692	162
	1,630	784
Excédant des revenus sur les charges pour l'exercice	3,130	2,853
Surplus au début de l'exercice	53,536	50,683
Surplus à la fin de l'exercice	\$56,666	\$53,536

NOTES SE RAPORTANT AUX ÉTATS FINANCIERS POUR L'EXERCICE SE TERMINANT LE 31 DÉCEMBRE 1980

1. Principales conventions comptables

(a) Stocks

Les stocks sont évalués au plus bas du prix coûtant et de la valeur nette probable de réalisation.

(b) Amortissement

Le mobilier et l'équipement acheté après le premier janvier 1979 est imputé aux résultats à l'achat.

L'actif immobilisé est amorti selon la méthode linéaire.

Immeubles — 40 ans

Améliorations locatives — 5 ans

Mobilier et équipement — 10 ans

(c) Réalisation des revenus

Les cotisations et les abonnements sont imputés à l'année à laquelle ils se rapportent alors que les subventions sont imputées à l'année durant laquelle elles sont reçues.

2. Actif immobilisé

	1980		1979	
	Coût	Amor. Accu.	Valeur Nette	Valeur Nette
Terrain	\$ 82,915	\$ —	\$ 82,915	\$ 82,915
Immeubles	1,376,435	168,723	1,207,712	1,242,123
Améliorations locatives	49,132	5,402	43,730	10,804
Mobilier et équipement	88,309	47,307	41,002	48,578
	\$1,596,791	\$221,432	\$1,375,359	\$1,384,420

3. Dette à long terme

	1980	1979
Hypothèque	\$459,729	\$465,973
Partie courante de la dette à long terme	6,000	6,618
	\$453,729	\$459,355

L'hypothèque est renégociable à chaque année le taux d'intérêt est actuellement de 13.25% par année.

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ÉTAT DES RÉSULTATS ET DU SURPLUS POUR L'EXERCICE SE TERMINANT LE 31 DÉCEMBRE 1980

	1980	1979
Revenus		
Intérêts	\$ 305	\$ 300
Charges		
Don à la section des orthodontistes de l'Association dentaire canadienne	300	300
Excédant des revenus sur les charges	5	—
Surplus au début de l'exercice	6,065	6,065
Surplus à la fin de l'exercice	\$6,070	\$6,065



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Le congrès de la FDI Rio de Janeiro septembre 1981

Un compte-rendu du Dr Gilbert Utas

L'Association dentaire canadienne était représentée par le Dr D.E. Williams, président, et le Dr G.E. Utas, trésorier national, tous deux à titre de délégués, ainsi que par le brigadier-général W.R. Thompson, ancien président de la Commission des services dentaires des forces de défense, et le professeur G.S. Beagrie, consultant auprès de la Commission de la formation et de la pratique dentaires, tous deux à titre de substituts.

Le Dr Beagrie a été réélu membre de la commission.

Le professeur Louis Baume, de Suisse, a terminé son mandat de deux ans à la présidence de la FDI et le Dr T. Aggeryd, de Suède, lui a succédé. Le Dr J. Jardiné, de France, a accédé au poste de président élu.

Soixante-trois pays étaient représentés, bien que la participation ait été beaucoup moindre qu'on ne l'avait prévu. En effet, 3 975 dentistes étaient présents, comparativement à 3 200 à Hambourg en 1980 et à 5 600 à Paris en 1979.

Les délégués ont participé à plusieurs réunions et activités, notamment la réunion du comité des finances de la FDI, une rencontre avec la délégation de l'association dentaire américaine, l'assemblée générale A, l'assemblée générale B, la période des questions et la réunion des trésoriers nationaux.

On a accordé beaucoup d'attention officiellement et officieusement, à tous les niveaux, à la situation financière de la Fédération.

Le conseil a accepté les recommandations du comité des finances concernant la cotisation supplémentaire que l'ADC demande aux adhésions de soutien, notamment que notre association maintienne les dispositions actuelles prévues au budget proposé et que le bilan des dépenses d'adminis-

tration soit soumis à l'approbation du comité exécutif. D'autres régions ont aussi adopté une attitude moins restrictive et plus souple.

La délégation de l'ADC a retiré sa résolution de 1980 concernant le financement. Elle a souligné, cependant, la nécessité de poursuivre les efforts visant à établir la structure des cotisations annuelles sur une base plus équitable.

L'ADC a appuyé une résolution plafonnant à 25% de l'ensemble la cotisation versée par chacune des associations membres; la mesure a été adoptée. Elle s'est opposée, par contre, à un amendement de l'association américaine qui voulait, à l'avenir, réduire davantage ce plafond; l'amendement a été rejeté.

La firme *Meon Group Travel*, de Londres (Angleterre), continuera au cours de la prochaine année à conseiller la Fédération sur les moyens à prendre pour réduire les frais de déplacement et d'hébergement à l'occasion du congrès annuel.

L'état du revenu et des dépenses pour 1980 a accusé un déficit considérable attribuable à l'augmentation des dépenses et à la baisse du revenu, et ce pour des raisons évidentes, entre autres, le taux d'échange défavorable entre le dollar américain et la livre sterling, la baisse des adhésions de soutien, la participation moins nombreuse qu'on ne l'avait prévu au congrès mondial et la hausse des frais de déplacement et d'hébergement due à l'inflation.

Les propositions visant à améliorer la situation financière en 1982 ont porté, entre autres choses, sur la réduction des dépenses, tels le déplacement et l'hébergement, la réduction des allocations journalières aux dirigeants de la FDI (de 70,00 \$ à 35,00 \$), la diminution du soutien accordé aux représentants des organisations régionales au conseil, la surveillance

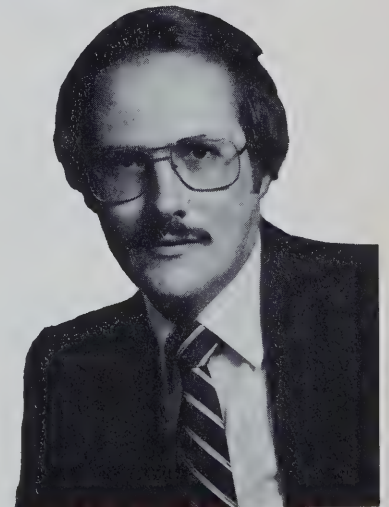
plus étroite des dépenses du congrès, ainsi qu'une plus grande utilisation de l'informatique et des machines de traitement de textes.

Au chapitre du revenu, on comptera davantage sur les recettes plus stables, telle la cotisation des associations membres, que sur les recettes plus aléatoires, telles la cotisation des membres de soutien, la participation au congrès ou la vente des publications. Par ailleurs, en faisant connaître davantage la FDI et ses activités, on espère augmenter le revenu des adhésions de soutien ainsi que la participation au congrès.

Après 1984, la FDI touchera 15 p. cent des frais d'inscription au congrès, 50 p. cent du surplus net et peut-être — il s'agit d'une suggestion — 10 p. cent du revenu brut de la location des espaces à l'exposition.

Le prochain congrès mondial de la FDI aura lieu du 10 au 16 octobre 1982, à Vienne (Autriche). Le congrès de 1983 aura lieu à Tokyo (Japon).

Nouveau directeur



Kingsley Butler a été nommé gérant général du CDSPI.

Les activités scientifiques de la FDI

Des articles précédents ont fait état de l'organisation de la Fédération dentaire internationale, de ses quatre commissions, ainsi que des principales activités du congrès qui a eu lieu récemment à Rio de Janeiro.

Le présent article souligne les principaux travaux scientifiques menés par les quatre commissions et leurs divers groupes de travail, dont les études se font, en grande partie, par correspondance et sont discutées en ateliers au cours du congrès annuel.

a) Commission de la recherche sur la santé buccale et en épidémiologie

Créée en 1979 à la suite du regroupement de trois commissions antérieures et présidée par le professeur J. Arnamo (Finlande), c'est la plus importantes des commissions de la FDI. Voici un aperçu des études que fera chacun de ses groupes de travail en 1982.

1) Études de la carie dentaire — groupe dirigé par le professeur P.J. Holloway (États-Unis):

- terminer un rapport technique à la suite de l'adoption d'une analyse "coût-efficacité" des programmes communautaires de fluoruration pour prévenir la carie dentaire;
- mettre à jour un rapport de la FDI sur les principales conditions dans lesquelles doivent se faire les essais en clinique des agents et des méthodes de prévention de la carie dentaire.

2) Avancement de la santé buccale — groupe dirigé par le Dr R.Y. Norton (Australie):

- terminer une étude internationale sur l'enseignement de l'hygiène dans les programmes de prévention contre la carie dentaire chez les enfants d'âge scolaire.

3) Détérioration progressive de l'émail — groupe dirigé par le Dr T.N. Cutress (Nouvelle-Zélande):

- terminer la mise au point d'un système de classement accompagné des connaissances scientifiques et cliniques en ce qui a trait à l'étiologie, à la prévalence et au traitement des défauts de l'émail qui ne sont pas attribuables à la carie dentaire.

4) Epidémiologie des maladies périodontales — groupe dirigé par le Dr R.D. Emslie (Royaume-Uni):

- simplifier et normaliser les méthodes servant à l'évaluation des besoins concernant le traitement des maladies périodontales;
- poursuivre l'étude des obstacles qui préviennent l'efficacité des soins parodontaires;
- formuler des objectifs en matière de santé périodontale pour l'an 2000.

5) Implantation buccale — groupe dirigé par le professeur H. Newesely (République fédérale d'Allemagne):

- mener un sondage sur la réussite et l'échec des implantations.

Outre les activités des groupes de travail mentionnés, la commission participe, conjointement avec l'Organisation mondiale de la santé, aux travaux de trois autres groupes que voici.

i) Programme complet de services d'hygiène buccale, mettant l'accent sur les maladies périodontales — groupe dirigé par le professeur G.S. Beagrie (Canada):

- poursuite, en 1982, de la recherche sur tout les aspects de la question, y compris les méthodes d'évaluation simplifiées des maladies périodontales dont il a été question,

dans les grandes lignes, au congrès de 1981.

ii) Méthodologie de la statistique appliquée à l'épidémiologie dentaire — groupe dirigé par le professeur P.J. Holloway (États-Unis):

- préparer une revue critique des méthodes statistiques utilisées actuellement dans la compilation des essais cliniques des agents prophylactiques.

iii) Acceptation par la société de la malocclusion — groupe dirigé par le professeur N.C. Cons (États-Unis):

- vérifier sur place, dans trois ou quatre pays, la méthodologie mise au point pour évaluer les indices socio-psychologiques en ce qui a trait au traitement des anomalies dento-faciales.

b) Commission des produits dentaires

Cette commission a présenté, au cours des dernières années, un grand nombre de rapports sur la normalisation des produits et appareils dentaires et participé, dans une certaine mesure, aux travaux de l'Organisation internationale de normalisation (ISO). Elle est présidée par le Dr J.W. Stanford (États-Unis). Voici un aperçu des études que fera chacun de ses groupes de travail en 1982.

1) Vérification clinique — groupe dirigé par le Dr G. Ryge (États-Unis):

- préparer des protocoles pour évaluer chez le patient l'usure des composites et des amalgames de restauration des dents postérieures.

2) Matériel pharmaceutique utilisé en médecine dentaire — groupe dirigé par le Dr E. Mitchell (États-Unis):

- examiner la prévention de l'in-

fection au cabinet du dentiste;
— revoir les recommandations actuelles en matière de prophylaxie antibiotique chez les patients souffrant de troubles cardio-vasculaires.

3) Relations avec l'industrie dentaire

- groupe dirigé par le Dr A. Atkinson (Royaume-Uni);
- mettre au point les lignes directrices recommandées en ce qui a trait à l'étiquetage des produits dentaires;
- terminer la liste des appareils dentaires;
- préparer une liste de classification de l'équipement dentaire.

4) Instruments prophylactiques —

- groupe dirigé par le Dr P. Nygaard Ostby (Norvège):
- préparer un rapport sur les paramètres fonctionnels des dentifrices;
- joindre ces données à celles qu'on a sur les brosses à dents et le brossage des dents.

5) Vérification de la toxicité —

- groupe dirigé par le Dr I. Langeland (États-Unis):
- le document recommandant des normes de pratique pour l'évaluation biologique des matériaux dentaires est terminé;
- révision de la méthodologie utilisée dans la vérification de la toxicité des implantations.

6) Suivis et autres informations —

- groupe dirigé par le Dr D. Beech (Australie):
- dernière révision d'un rapport sur les instruments, les appareils et les matériaux endodontiques;
- suivi sur les procédés de mordantage et les ciments de verre ionomérisé.

c) Commission de la formation et de la pratique dentaires

Cette commission a été créée en 1979 à la suite du regroupement de deux commissions. Elle est présidée par le Dr W.D. Heffron (Australie). Outre les groupes de travail mentionnés ci-dessous, la commission a proposé la création en 1982 de deux autres groupes, l'un sur la déontologie et la jurisprudence, et l'autre sur la main-d'oeuvre dentaire.

1) Transférabilité des permis —

- groupe dirigé par le professeur G.L. Howe (Hongkong):
- analyse d'un sondage mené sur la question et préparation d'un rapport.

2) Formation continue — groupe

- dirigé par les professeurs G.S. Beagrie (Canada) et E.D. Farmer (Royaume-Uni):
- évaluation et efficacité de la formation continue.

3) Ergonomie et hygiène au cabinet du dentiste — groupe dirigé par

- le Dr B. Wagner (République fédérale d'Allemagne):
- liaison auprès de l'ISO en ce qui a trait aux normes de l'équipement dentaire (éclairage, tabourets, fauteuils et outils), notamment leur aspect ergonomique;
- surveillance des développements touchant l'hygiène et l'efficacité au cabinet de pratique et enquête sur les risques professionnels.

4) Auxiliaires dentaires — groupe

- dirigé par le professeur N.P. Butler (Irlande) et le Dr W.D. Heffron (Australie):
- terminer une étude sur l'état des lois concernant les techniciens dentaires ou denturologistes;

- terminer un document sur la classification du personnel auxiliaire;
- compléter une analyse sur la diversité des titres et des tâches.

d) Commission des service dentaires des forces de défense

Bien que les activités de cette commission soient orientées de façon plus précise que les précédentes, les rapport de ses anciens groupes de travail dans le domaine de la barodontalgie ont déjà trouvé des applications directes en matières d'aviation civile et de plongée sous-marine. La commission est présidée par le commandeur R. Cronstrom (Suède). Voici un aperçu des travaux de ses groupes de travail.

1) Dentisterie aérospatiale — groupe

- dirigé par le lieutenant-colonel O. Carlsson (Suède):
- étude sur la perte de l'os mandibulaire chez le personnel volant;
- étude de la barodontalgie.

2) Dentisterie de la plongée en eau profonde — groupe dirigé par le capitaine R.G. Triplett (États-Unis):

- étude des problèmes survenant en plongée en eau profonde;
- étude des effets de l'oxygène sous pression supérieure à la normale dans le traitement des maladies buccales et maxillo-faciales.

3) Évolution du rôle de l'officier dentaire en situation de guerre ou de désastre — groupe dirigé par le colonel O. Schultz (République fédérale d'Allemagne):

- examiner minutieusement ce qui s'est fait dans le passé dans le domaine, en faire rapport et en suggérer les règles.

Au mois d'avril: Santé dentaire et alimentation

De nos jours, où le traitement des aliments préparés d'avance est si raffiné et répandu, il importe plus que jamais d'avoir de bonnes habitudes d'hygiène dentaire.

Voilà, en substance, le message que véhiculera, au mois d'avril 1982, la prochaine campagne du Mois national de la santé dentaire. Il reviendra constamment dans le dossier d'information qui comprendra toute la documentation nécessaire, discours, articles de presse, plans d'action, projets d'activités dans les écoles, brochures et documentation sur l'alimentation.

Les dossiers seront distribués à toutes les associations provinciales du pays qui, ensuite, les feront parvenir aux sociétés dentaires locales. Ce sont des outils essentiels à la bonne marche

de la campagne, parce qu'ils contiennent des renseignements précieux pour ceux qui veulent organiser des activités au niveau de leur localité ou de leur province.

Le thème de la campagne de 1982 sera: «Sourions...». Cette année encore, le Mois national de la santé dentaire sera présidé à l'échelle du pays par le Dr Michel Carvonis, de Hull (Québec).

On pourra se procurer le matériel de propagande, dossiers, affiches et décalques, auprès des associations provinciales. Le siège social de l'ADC fournira les films et les brochures sur la santé dentaire (on trouvera les bons de commande dans le dossier), tandis que, cette année encore, l'Association des hygiénistes dentaires du Canada offrira les macarons.

Les écoliers du niveau primaire seront de nouveau invités à participer activement au Mois national de la santé dentaire, en prenant part au concours de dessin. Une bicyclette sera remise au gagnant de chacune des trois catégories.

N'oubliez pas d'inscrire le Mois national de la santé dentaire à votre calendrier.

Préparez-vous à y participer de quelque façon que ce soit et à accepter le sourire aux lèvres l'invitation qu'on pourrait vous faire.

La réussite de la campagne de 1982 dépend de votre participation à tous les niveaux, local, provincial ou national, et ce non seulement pendant le mois d'avril mais aussi à longueur d'année.

L'histoire des dentistes du secteur public

La Société canadienne des dentistes des services d'hygiène publique a été créée en 1966, au cours du congrès de l'Association dentaire canadienne qui avait été tenu cette année-là à Halifax.

Au cours de ses huit premières années d'existence, la société s'est surtout efforcée de faire reconnaître officiellement la spécialisation du dentiste oeuvrant dans les services d'hygiène publique.

Ce qui fut fait en octobre 1973.

En même temps, la société s'est consacrée à la préparation de documents sur un régime de santé dentaire à l'intention des enfants du pays, sur les services d'hygiène publique du pays et sur l'établissement d'un plan de formation pour les auxiliaires.

Elle a vu croître son effectif et ses finances d'une année à l'autre.

Après un an de consultation des dossiers et de la correspondance, le Dr Bob Feasby, de Toronto, nous en livre aujourd'hui un historique bien

documenté, sous le titre *History of the Canadian Society of Public Health Dentists*. Il s'agit d'une publication de

28 pages, dont on peut se procurer un exemplaire au Centre des ressources de l'ADC.

Dalhousie crée le prix du Williams



Ses condisciples ont rendu hommage d'une façon spéciale au Dr D.E. Williams, président de l'Association dentaire canadienne.

Pour souligner son élection à la présidence de l'ADC, la promotion de 1955 de la faculté de médecine dentaire de l'Université Dalhousie, a baptisé du nom du Dr D.E. Williams un prix de mérite scolaire qui sera décerné annuellement à un étudiant de Dalhousie.

L'annonce en a été faite au congrès annuel de l'ADC, à Calgary, par le Dr A.E. Cluett, un des condisciples du Dr Williams.

Il reste cependant à en préciser certaines modalités, à savoir si le prix, un livre, ira à un étudiant de troisième ou de quatrième année et dans quelle discipline.

Étude inédite sur la denture des jumeaux

Une recherche unique au monde, qui se poursuit actuellement, pourrait bien marquer une étape importante dans l'avancement de la médecine dentaire.

Elle porte entièrement sur la denture des jumeaux.

Des généticiens dentistes tentent, en effet, de percer certains aspects du mystère qui entoure les jumeaux en examinant de près les rôles que jouent l'hérédité et l'environnement dans la dentition des jumeaux au Canada.

La réussite du projet permettra aux dentistes de connaître les causes de la malocclusion et de mettre au point les traitements appropriés.

Cette recherche inédite, qui aura une grande influence sur la l'étude de la génétique et la prévention orthodontique, se poursuit conjointement au centre médical de l'université McMaster, à Hamilton, et à l'université de l'Indiana, à Indianapolis.

Les généticiens dentistes qui participent au projet ont aidé à compiler de nouvelles données sur un groupe de jumeaux adultes qui sont nés à Toronto entre 1936 et 1959. En étudiant la formation de leurs dents et de leurs mâchoires et en notant leur histoire, les chercheurs espèrent établir si la malocclusion et les autres défauts similaires, telle la sur-occlusion et l'écartement sont attribuables à l'hérédité ou à l'environnement.

L'étude chez les jumeaux peut aussi aider à prouver si les habitudes alimentaires affectent le développement des dents.

M. Adam Winterton, adjoint de recherche, qui travaille au centre médical de McMaster, explique que «l'hypothèse de travail consiste à savoir si la malocclusion peut être attribuée à des causes prénatales ou maternelles».

C'est ce que feront ressortir les données, si elles montrent une diffé-

rence entre la dentition des vrais jumeaux issus d'un seul placenta (monochorionnaire) et celle des vrais jumeaux issus de deux placentas (dichorionnaires), ces derniers s'étant développés dans des environnements distincts et différents quoique dans un même sein.

«S'il y a une corrélation plus étroite entre les jumeaux monochorionnaires qu'entre les jumeaux dichorionnaires, on pourra alors conclure que le premier groupe a définitivement subi des influences prénatales», de dire M. Winterton.

Le responsable du projet, le Dr Rosario Potter, généticienne dentiste de l'université d'Indiana, étudie l'occlusion dentaire depuis 1968 et ce sont ses premières constatations dans le domaine qui l'ont incitée à examiner de plus près le cas des jumeaux.

Dans le passé, on a toujours divisé les jumeaux en deux catégories, les faux jumeaux (ou dizigotes) et les vrais jumeaux (ou monozygotes). Le Dr Potter va un peu plus loin en comparant les deux groupes de vrais jumeaux (monochorionnaires et dichorionnaires).

«Nous comparons deux types de vrais jumeaux, ce qui ne s'était jamais fait auparavant... dans le monde, dit-elle. De fait, ce sont trois types de jumeaux que nous examinons.»

Le Dr Potter peut faire la comparaison en analysant les données originales recueillies, à la naissance, chez le même groupe de 1 800 paires de jumeaux, dont les renseignements placentaires avaient été compilés sur une période de 22 ans (1936-1959) par le Dr Irene Uchida, qui est aujourd'hui professeur à McMaster et co-responsable du projet. (Au moment de la compilation, elle travaillait avec Norma Ford Walker qui s'est fait remarquer par son étude du cas des jumelles Dionne.)

Le Dr Potter espère que les nouvelles données «nous apporteront des renseignements précieux en ce qui a trait à l'environnement et au rapport entre celui-ci et l'occlusion chez les jumeaux».

Quoique l'équipe en soit encore à la phase de la compilation des données, le Dr Potter trouve le projet passionnant, notamment ce qu'il révélera des caractéristiques occlusales chez les jumeaux.

Dans un article sur la variété des caractéristiques occlusales chez les jumeaux, qu'elle a rédigé avec la participation de Robert Corrucini et Larry Green et qui a été publié au début de l'année dans le *Journal of Craniofacial Genetics and Developmental Biology*, le Dr Potter dit en substance qu'on ne croyait pas ordinairement pouvoir prévoir ni prévenir les défauts occlusals. Elle ajoutait cependant que si on arrivait à mieux comprendre le rapport entre les causes génétiques et environnementales des caractéristiques occlusales, cela influencerait considérablement non seulement les mesures de prévention orthodontique en clinique et le traitement, mais aussi l'orientation de la recherche en génétique.

Depuis le début de la recherche, il y a six mois, les chercheurs travaillent à fond de train à la compilation des données, de noter le Dr Potter. Ils ne s'attendent pas à terminer cette phase des travaux avant le mois de février 1983.

Ayant déjà complété le dossier de 60 paires de jumeaux, ils comptent en préparer 200 au cours de la période de temps qu'ils se sont fixés.

M. Winterton précise que cet échantillonnage, significatif sur le plan de la statistique, ne comprend que des jumeaux de même sexe. L'équipe estime qu'elle aurait ajouté une autre variante aux données si elle y avait inclu des paires de jumeaux de

sexe différent. On a aussi fixé une limite d'âge (les jumeaux ont de 22 à 32 ans) de façon à exclure les sujets plus âgés chez lesquels il aurait fallu tenir compte davantage de l'usure des dents. «Ceci aurait compliqué l'étude davantage», dit-il.

L'équipe a reçu une subvention de 200 000 \$ de l'Institut national de la recherche dentaire. Outre les Drs Potter et Uchida et M. Winterton, elle comprend le Dr Ron Temple, dentiste de Toronto, qui fait les modèles de la dentition des sujets, et le Dr Terry Reed, d'Indiana, qui fait le rapport

avec les empreintes des mains et des pieds.

M. Winterton est chargé de compiler tous les renseignements non techniques obtenus à la suite d'entrevues, les génotypes (empreintes) et les types sanguins. L'information concernant les génotypes est ensuite envoyée au Dr Reed qui établit si les empreintes sont identiques.

Le Dr Temple visite les sujets dont il mesure l'occlusion et fait un moule en plâtre de la mâchoire. Il note aussi s'ils sont gauchers ou droitiers et s'ils

ont déjà reçu des traitements orthodontiques.

Les moules et les autres informations sont envoyés au Dr Potter.

Quoique la recherche en soit encore à ses débuts, le Dr Temple a déjà noté «certaines similarités frappantes de l'arcade dentaire» chez certains vrais jumeaux.

Cette recherche apportera certes de nouvelles découvertes concernant les effets de l'hérédité et de l'environnement sur certains défauts occlusaux, ce qui éclairera davantage les dentistes et les généticiens.

Révision des catégories d'agrément

Le Conseil de l'éducation de l'Association dentaire canadienne a révisé les catégories d'agrément dont il se réserve d'établir les modalités.

Sont admissibles à l'agrément les nouveaux programmes d'enseignement qui, sur la foi d'une visite liminaire de l'institution ou de la description qu'en fait le prospectus (le genre de cours offerts, l'effectif de la faculté, etc.), satisfont à des exigences minimales.

Toujours sur la foi d'une visite liminaire ou du prospectus, tout programme ainsi admissible reçoit l'agrément préliminaire qui est renouvelé annuellement s'il continue de satisfaire aux exigences, et ce jusqu'à ce que le premier groupe d'étudiants ait atteint la dernière année d'études.

L'agrément provisoire est accordé, à la suite d'une visite des lieux et après examen du prospectus, aux programmes établis qui présentent des faiblesses importantes dans une des matières enseignées. Quoique cette catégorie indique qu'il y a des faiblesses sérieuses, le programme d'enseignement n'en est pas moins considéré comme convenable et satisfaisant aux exigences d'admissibilité en regard des

examens de licence. Si, cependant, les faiblesses ne sont pas corrigées, l'agrément sera retiré; l'institution doit améliorer son programme de façon substantielle au cours de l'année.

L'agrément conditionnel touche les programmes qui ont, dans au moins une matière d'enseignement, des faiblesses précises et susceptibles d'être

corrigées dans un délai raisonnable, c'est-à-dire en moins de deux ans. Si le programme est considéré comme convenable et satisfaisant aux exigences d'admissibilité en regard des examens de licence, l'institution doit, à la fin de la première année, faire rapport des améliorations qu'elle y a apportées.

Ministre de la Santé

Il y a eu vingt-six ans le 20 juin 1981 que la ville de Brantford ajoute du fluorure dans ses approvisionnements d'eau potable pour améliorer la santé dentaire de ses citoyens. Aujourd'hui, 72 pour cent des résidents de l'Ontario qui s'alimentent aux services d'aqueduc publics bénéficient des avantages de la fluoration.

Avec les années, la fluoration de l'eau s'est avérée la mesure d'hygiène publique la plus efficace et la plus économique pour prévenir la carie dentaire. De vastes recherches scientifiques n'ont apporté aucune preuve

valable à l'effet que l'absorption d'eau fluorée à un degré optimal entraîne ou aggrave des problèmes de santé.

Donc, d'accord avec les recommandations de l'Association dentaire canadienne, je n'hésite pas à souligner l'importance de la fluoration pour prévenir la carie dentaire dès le jeune âge ni à inciter ardemment les municipalités à recourir, partout où c'est faisable, à cette mesure d'hygiène publique qui est sûre, efficace et bien établie.

*Le ministre de la Santé,
Dennis R. Timbrell*

A sedation technique for the younger child

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ABSTRACT

A technique utilizing meperidine, promethazine and chlorpromazine for sedation of children during dental care is described. Supplementing the drug action with nitrous oxide has made it possible to reduce the overall dosage. It is emphasized that the timing of initiating treatment is important.

With the advent of the Saskatchewan Dental Plan and the establishment of dental nurses within that province, more children are having dental care and at an earlier age. The Saskatchewan Dental Plan has limited resources for managing behavioral problems and therefore, in most cases, these children are referred to private dentists, thereby increasing the dentists' need for suitable adjuncts to patient management.

In the past, various sedation techniques have been used to avoid the need for general anaesthesia and the use of hospital operating rooms.¹⁻³ Hospital operating room facilities are frequently inaccessible and inadequate for many forms of dental treatment, thereby causing inefficient use of time and resulting in an inability to treat the number of patients involved. Hence, dentists must rely on other methods.

Drugs have been administered orally, but this is unpredictable and frequently results in an inadequate level of sedation.⁴ The technique of nitrous oxide combined with oxygen inhalation has been used for many years but is also insufficient, by itself, to manage many of these children. Rectal drug administration has also been found to be somewhat unpredictable and unpleasant for the patient. The intramuscular route of drug administration has a more predictable rate of absorption. Drugs must be selected and optimal dosages chosen to maintain an adequate margin of safety, minimize side effects, and yet provide adequate level of sedation. This has led to the selection of a combination of drugs to be injected intramus-

cularly. The resulting sedation could be modulated with nitrous oxide/oxygen inhalation, using appropriate levels to achieve the desired level of sedation.

This article describes the technique utilizing a combination of meperidine, promethazine and chlorpromazine in conjunction with nitrous oxide/oxygen for sedating the young dental patient. The literature contains articles describing the use of these three drugs in combination without the use of nitrous oxide.⁵⁻⁷

A Review of the Drugs Used

Meperidine, like other narcotics, exerts its chief pharmacological actions on the central nervous system.² In therapeutic doses, it mainly produces analgesia, sedation, euphoria and respiratory depression, which can be countered by a narcotic antagonist.^{2,5} We would not anticipate respiratory depression at the lower dosages used in this technique.⁸ It has no significant untoward effects on the cardiovascular system, particularly in recumbent patients. Side effects may include dizziness, sweating, dry mouth, nausea and weakness.

Promethazine is a representative of the H-blocking antihistamines.² These drugs counteract many of the actions of histamine, especially those related to smooth muscle action, although less so with bronchial reactions. They may stimulate or depress the central nervous system, although sedative effects are usual. Antihistamines act centrally to counteract nausea and motion sickness.^{2,3} Parasympatholytic activity results in some drying of the mouth. Except following rapid intravenous injection, these antihistamines have no significant effect on the cardiovascular system. The blood pressure is well sustained and may even be slightly elevated. There may also be an antiarrhythmic effect. Side effects include dizziness, lack of co-ordination, loss of appetite, possible allergy and local irritation.

Chlorpromazine belongs to the group of phenothiazide derivatives.² Its main effects are on the central nervous system; sedation is usual. The drug also has antipsychotic

effects which may take several doses to develop. There is little effect on the respiration when used alone. There may be a fall in blood pressure primarily, associated with orthostatic hypotension,⁹ (in extreme cases, phenylephrine may be used to combat the hypotension). Chlorpromazine also has an antiarrhythmic effect and has a wide margin of safety. Side effects include extrapyramidal effects and hypersensitivity reactions. Tardive dyskinesia has also been noted, primarily in cases of frequent large doses for a long period of time — not in single dose usage.¹⁰

Nitrous oxide is the only inorganic gas that is practical for use in clinical anaesthesia.² As an adjunct to anaesthesia, proportions of 50-60 per cent nitrous oxide are commonly used. Lesser amounts may produce a significant analgesic effect with mild sedation while maintaining patient cooperation. With adequate oxygenation there are minimal effects of nitrous oxide on the cardiovascular or respiratory systems;¹¹ an infrequent side effect is nausea. There is no significant evidence of toxicity in exposures of 24 hours or less.

When these drugs are used in combination as described in this paper, the dosages are proportionally lower than the individual recommended therapeutic dosages. According to Israel et al, this mixture has been shown to have minimum effects on the ventilatory state and level of oxygenation in the great majority of children.¹²

All of these drugs blend well, with one tending to offset the side effects of another. In the dosages used, the cumulative depressant effect has the overall result of tranquil sedation. Nitrous oxide is administered in combination with oxygen up to a maximum of 50 per cent nitrous oxide, and only to modulate the level of sedation created by the other drugs. The children will react to pain, thus requiring the concomitant use of local anaesthesia.

Patients and Method

This study is based on a sample of 40 consecutive patients referred by other dentists for behavior management. The first appointment is for consultation only. At this time the child is evaluated physically and psychologically and a medical history is taken to discover any factors relevant to the contemplated therapy as well as to rule out any contraindications to any of the drugs that might be used. The dental requirements are also noted. Parents are then informed as to what the procedure will entail and potential side effects are discussed. They are cautioned not to allow their child to eat or drink anything on the morning of the next appointment, at which time treatment will begin.

On the morning scheduled for treatment, the patient is brought to the clinic and briefly re-evaluated (for evidence of a cold, nasal congestion, etc.); if the behaviour permits, preoperative vital signs are recorded. The dosage of drugs to be injected is determined according to the patient's weight. The dosages used are as follows: meperidine, 1.5

mg. per kg.; promethazine, 0.75 mg. per kg.; chlorpromazine, 0.65 mg. per kg. In some instances the dosages are increased by up to 5 per cent if the child displays a high level of anxiety. It is felt that this dosage would have minimal effect on the patient's haemodynamics.¹³ The drugs are then carefully drawn in a tuberculin syringe and administered intramuscularly in the upper, outer quadrant of the buttocks by a registered nurse. This has the additional benefit that the child does not associate the operator with the injection of drugs. The child is then returned to the parent, who is asked to hold the child in as quiet and subdued a manner as possible. Thirty to 40 minutes has been found to be the optimal interval from the time of injection until the child is brought to the operator for treatment. It is essential not to prolong this interval, as experience has shown that to do so (eg. waiting one hour) frequently resulted in a less than successful level of sedation. Experience has also shown that using a wrap (eg. *Pedi-Wrap*®)* around the child results in a more calm and relaxed patient, as well as providing restraint.¹⁴

In this study, the patient's vital signs (blood pressure, pulse rate, respiratory rate) were monitored every 15 minutes. Access to one arm was maintained for this purpose. When the child was placed in the wrap in the supine position, nitrous oxide/oxygen mixture was administered via nasal inhalation mask. The proportion depended on the level of sedation achieved with the injected drugs and was adjusted as necessary, thereby modulating the sedation to an optimal level. The proportion of nitrous oxide was usually about 40-50 per cent until administration of the local anaesthetic, after which it was reduced to 10 per cent for the duration of the procedure. Local anaesthesia is used routinely; this sedation technique does not preclude its use.¹⁵ All restorative treatment was performed with a rubber dam in place, thus minimizing the risk of aspiration of materials used.¹⁶

The duration of the appointment was usually one hour (not including the 40 minute interval for the drugs to take effect). Although not essential, 100 per cent oxygen was administered briefly at the end of treatment and the patient was gradually raised to the upright sitting position. If not already alert, the child was roused and observed to ensure that the majority of the sedative effect had passed (usually only the time needed to fill out the charts). At this time the child was once again evaluated for the degree of success of anxiety management, and then dismissed in the care of the parent, who was again instructed as to what might be expected and told the child would be quite sleepy; as a rule they sleep for 4 to 6 hours following the procedure, waking up around supper time, and then returning to sleep for the night.

A postoperative questionnaire was sent to all parents, requesting a reply as to their acceptance of this technique.

*Clark Associates Inc.
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Table 1
Data accumulated on the patients in test sample

Parameter	Average variation during course of treatment
Systolic blood pressure	16.3 mm Hg. Range 2 to 50)*
Diastolic blood pressure	11.5 mm Hg. (Range 0 to 20)
Pulse rate	27.5 bpm (Range 0 to 80)
Respiratory rate	3.5 rpm (Range 0 to 10)
Number of patients	40
Average age	50.1 months (Range 18 to 120)

*Noted briefly in one case only

RESULTS

Monitoring the patients every 15 minutes throughout the procedure indicated that there was very little change in blood pressure (**Table 1**), and the pulse remained regular. An increase in pulse rate and blood pressure, as reflected in the data and which decreased quickly to normal, was usually noted during the administration of local anaesthetics. There was very little change in the respiratory rate. In two cases, sedation was inadequate for treatment and these patients were seen at a second appointment, when the injected drug dosage was adjusted; we regard this number as being small. Thirty out of 40 (82.5 per cent) parents replied to the questionnaire and their responses were positive. In all but one case, they would permit their child to be treated with this technique again. The one person who would not, stated she would have preferred that the child be treated in the operating room under general anaesthesia.

DISCUSSION

In addition to the patients included in this study, we have used this technique in more than 1300 patients without encountering any difficulty. The most likely side effect would be respiratory depression. We have found this only once (not during this series) and in that case it resolved spontaneously with airway maintenance and post-operative observation. Adequate training and experience are important in preventing and recognizing complications as well as managing such a complication efficiently should it occur.

SUMMARY

We have described a technique which permits treatment of the young apprehensive child, thus avoiding the need for admission to hospital for treatment in the O.R. with all of its attending disadvantages. It is a technique which, with the necessary precautions, has been shown to be safe when used by an operator who is trained in the use of sedation techniques and cardiopulmonary resuscitation. Similar drug combinations are being used successfully for

other procedures such as cardiac catheterization, where little change was noted in the haemodynamics, ventilatory state or level of oxygenation in the patients.¹² In most of these cases the dosages used are higher than that used in this study.

CONCLUSIONS

We feel that on the basis of our experience we can recommend the technique described here to those practitioners with knowledge of the drugs involved as well as the capability and facilities to maintain an adequate airway and ventilation in the young patient.

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MATERIALS AND METHODS

- 1 Wright, G.Z. and McAuley, D.J. Current premedicating trends in pedodontics. *J Dent Child* 40:195, 1973.
- 2 Goodman, L.S. and Gilman, A. The pharmacological basis of therapeutics. Ed. 5. Chapters 6:81-83; 12:157-166; 15:245-267 and 29:603-611. New York, MacMillan, 1975.
- 3 King, D.L. and Berleocher, W.C. Premedication in pedodontics: Attitudes and agents. *Ped Dent* 1:251, 1979.
- 4 Chambiras, P.G. Sedation in dentistry: the oral intramuscular route for the administration of preoperative sedation drugs. *Aust Dent J* 84-89, April 1969.
- 5 Meyers, D.R. and Shoal, H.K. The intramuscular use of a combination of meperidine, promethazine and chlorpromazine for sedation of the child dental patient. *J Dent Child* 44:453, 1977.
- 6 Smith, D., Rowe, R.D. and Vlad, P. Sedation of children for cardiac catheterization with an ataractic mixture. *Can Anaes Soc J* 5:35, 1958.
- 7 Berntman, L. and Carlson, C. Influence of "lytic cocktail" on blood flow and oxygen consumption in the rat brain. *Acta Anaes Scand* 22:515, 1978.
- 8 Wilson, J. and Wilson, S.M. A reappraisal of the role of pethidine in Jorgensen's technique in dentistry. *Dent Pract Dent Res* 22:37, 1971.
- 9 Baum, D., Brown, A.C. and Church, S.C. Effect of sedation on oxygen consumption of children undergoing cardiac catheterization. *Pediatrics* 39:35, 1967.
- 10 Paulson, G.W., Rizvi, C.A. and Crane, G.E. Tardive dyskinesia as a possible sequel to long-term therapy with phenothiazines. *Clin Ped* 14:953, 1975.
- 11 Everett, G.B. and Allen G.D. Simultaneous evaluation of cardio-respiratory and analgesic effects of nitrous oxide — oxygen inhalation analgesia. *J Amer Dent Ass* 83:129, 1971.
- 12 Israel, R. et al. Evaluation of sedation during cardiac catheterization of children. *J Pediatr* 70:407, 1967.
- 13 Benusis, K.P., Kapaun, D. and Furman, L.J. Respiratory depression in a child following meperidine, promethazine, and chlorpromazine premedication: report of a case. *J Dent Child* 46:50, 1979.
- 14 Tobias, M.G., Lipschultz, D.H. and Alleum, M.M. A study of three preoperative sedation combinations. *J Dent Child* 42:453, 1975.
- 15 Douma, M.E., Mayer, B.W. and Carrel, R. Intravenous anesthesia for pediatric dentistry in a hospital or institutional setting. *J Dent Child* 285-289, July-August, 1975.
- 16 Allen, G.D., Ricks, C.S. and Jorgensen, N.O. The efficacy of the laryngeal reflex in conscious sedation. *J Amer Dent Ass* 94:901, 1977.

Intramural and Mural Ameloblastoma

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The cystic change in an enamel organ prior to enamel deposition leads to the formation of a primordial cyst. The dentigerous cyst is a result of the alteration of the reduced enamel epithelium after the crown has been completely formed. The accumulation of fluid between the layers of the enamel epithelium or between the epithelium and the tooth crown is responsible for its clinical presentation. Follicular cyst is another term used to describe this type of cyst as it arises from the dental follicle.¹ The most common type of follicular cyst is the dentigerous cyst (95 per cent) and of the odontogenic cyst it forms about a third.²

The dentigerous cyst has been observed more often in males than in females,^{2,3} most commonly in the age group 21-30 years, and it has no evidence of race predilection. The lesions appear more frequently in the mandible (73 per cent) than in the maxilla¹⁻⁴ and are most commonly associated with the unerupted third molar, canine and premolar.¹⁻⁴

Bhaskar¹ in his audits points out that 82 per cent of the connective tissue walls of all follicular cysts contain odontogenic epithelium in small islands of cells. Further examination of his work reveals ameloblastic proliferation in 5-6 per cent of these cysts, and that 15-33 per cent of all of the ameloblastomas arise from dentigerous (follicular) cysts. This evidence is generally supported by other authors.⁴

CASE REPORT

A 25-year-old man was seen in the Oral Surgery Clinic of University Hospital, with a chief complaint of a very mobile 47, with pain while chewing.

The patient had noticed a slight degree of swelling in the alveolar ridge and buccal sulcus distal to the mobile 47. On physical examination, there was no visible asymmetry. The intraoral examination revealed a slight fullness in the buccal and superior alveolar ridge distal to the second permanent molar and a slight compressibility on the disto-buccal alveolar ridge area. The overlying attached and unattached gingiva was normal in color and texture. The second permanent molar was mobile in all directions.

Radiographically (Fig. 1), a large radiolucent area with a corticated outline was visualized, involving most of the angle of the ramus except the inferior border. There was

an unerupted third molar at the distal inferior aspect and a second permanent molar at the superior anterior aspect. The second molar had some resorption on the distal root and some on the mesial root. The inferior vascular bundle had been displaced inferiorly and slight superior alveolar expansion could be visualized.

The patient was scheduled for surgical enucleation of cyst, removal of unerupted third molar, extraction of second molar and pathologic examination of tissue. The physical examination and routine laboratory screening were all within normal limits.

A full-thickness mucoperiosteal flap was raised from the first bicuspid up the ascending ramus to adequately expose the surgical site. The periosteum was raised buccally to the lesion, exposing a very thin expanded cortical plate. No lingual flap was attempted. The second permanent molar was removed by forcep without perforating the lesion; the cystic membrane could be visualized and compressed. The thin buccal plate of bone was gently removed, exposing the thick fibrous capsule. Enough buccal bone was removed with rongeurs, surgical bur and saline lavage to enable the total enucleation of cyst and attached third molar.

Enucleation was carried out using large curettes, working the lesion away from the bony crypt. The cyst was firmly attached to the cemento-enamel junction of the



Fig. 1



Fig. 2

unerupted third molar, which facilitated its removal (Fig. 2).

Careful inspection of the bony crypt revealed the tissue was free of pathology. The bony walls were trephoned to promote faster healing and the area closed primarily with 000 plain sutures. A local pressure dressing was placed over the area with extraoral tag and the throat pack removed. The patient's stay in hospital was uneventful, and he was discharged the next morning. On discharge, analgesics, antibiotics and a soft diet were prescribed for the next four days. Postoperative outpatient clinic appointments were given for follow-up care.

Histologic examination

The gross specimen was opened (Fig. 2) to reveal a cyst

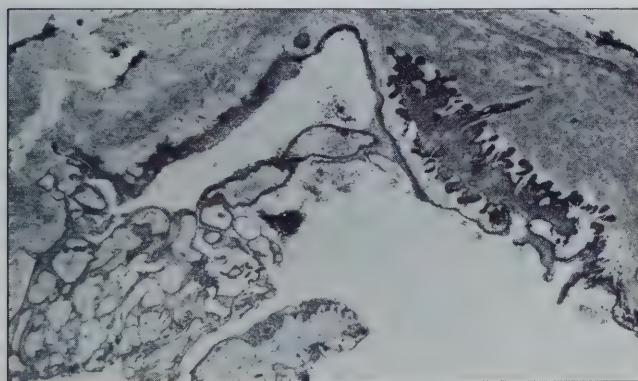


Fig. 4

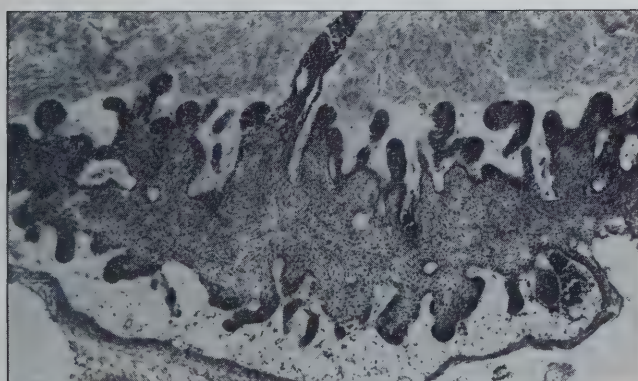


Fig. 5

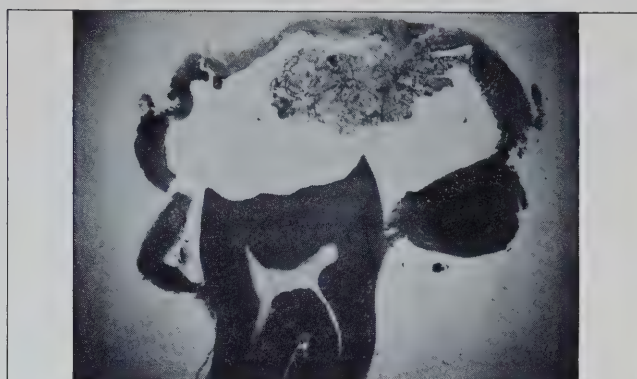


Fig. 3

lining, with a large area above the crown showing mural hyperplasia. The cystic outer membrane appeared normal and firmly attached to the unerupted tooth at the cemento-enamel junction. The decalcified specimen shows the relationship of the intraluminal tumor to the cyst (Fig. 3).

Histologic examination revealed a section of cystic structure, the lumen of which was lined by a thin layer of non-keratinized squamous epithelium, exhibiting a small amount of subepithelial hyalinization. The connective tissue exhibited a mild inflammatory infiltrate, consisting primarily of plasma cells and neutrophils. The focus of gelatinous tissue which was found within the cystic lumen consisted of narrow strands of squamous epithelium exhibiting a plexiform pattern (Figs. 4, 5 and 6). The neoplasm does not extend beyond the cell wall.

The pathologic diagnosis was dentigerous cyst exhibiting intraluminal and mural ameloblastoma. Pre- and postsurgical diagnosis was dentigerous cyst.

DISCUSSION

Two considerations uppermost in the surgeon's mind before and during surgery are fear of fracturing the mandible and nerve injury. Obviously the patient must be informed of these possibilities. Postoperative problems may arise from infection developing in such a large surgical wound, and therefore oral cleanliness before, during and after surgery are important considerations, together with

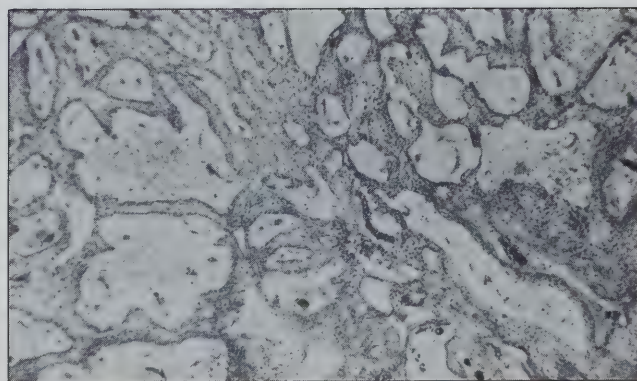


Fig. 6

systemic antibiotics. The patient must be followed up routinely in an outpatient clinic.

The dentigerous cyst in this case report was typical for site, age and sex of the patient, and radiographic and clinical appearance. An interesting observation was the resorption of the roots of the second molar. Stanley and Diehl⁵ stated in 1965 that when ameloblastoma occurs in association with impacted or unerupted teeth, the patients are usually under 30 years of age.

The careful total enucleation of the lesion was the most single important factor in the care of this patient, and supports the concept of total enucleation of cystic lesions whenever clinically possible. Marsupialization in this case would have most certainly seeded the lesion, and later would have presented a more complicated surgical problem. This could well have been a squamous cell carcinoma with even more serious consequences to the patient. Lucas¹ states that it is particularly essential for the pathologist to examine thoroughly the lining of any cystic cavity, with attention to nodules, folds and thickening, and submit them to histologic scrutiny.

Microscopically, the ameloblastoma is characterized by epithelial islands or strands in a collagenic fibrous connective tissue stroma. Ameloblastic cells make up the periphery of the strands or islands. The most commonly demonstrated patterns are the follicular and plexiform analogous to the lower and upper portions of the dental lamina.⁶

The follicular type mimics the enamel organ, the outermost cells resemble those of the inner dental epithelium (ameloblastic). They are tall columnar with nucleus "polarized" away from the basement membrane. The central areas represent a loose network of cells representing stellate reticulum.

The plexiform type (Fig. 6) is an irregular mass interdigitating cords of epithelial cells. The stellate reticulum zones are not well defined as in the follicular type. The cells on the borders somewhat resemble the ameloblast or basal cell and there is often cystic degeneration with this type. However, care must be taken to differentiate this type from neoplastic epithelial proliferation common in the walls of dental cysts.⁷

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REFERENCES

- 1 Lucas, R.B. Pathology of tumors of the oral tissues. Ed 3. Edinburgh, London and New York, Churchill Livingstone, 1976.
- 2 Bhaskar, S.N. Synopsis of oral pathology. St. Louis, Mosby, 1969.
- 3 Shafer, W.G., Hine, M.K. and Levy, B.M. A textbook of oral pathology. Ed 2. Philadelphia, Saunders, 1963.
- 4 Taylor, R.N. et al. Dentigerous cyst with ameloblastomatous proliferation: report of a case. Oral Surg 29:136, 1971.
- 5 Stanley, H.R. and Diehl, D.L. Ameloblastoma potential of follicular cysts. OrtOral Surg 20:260, 1965.
- 6 Spouge, J.D. Odontogenic tumors. Oral Surg 24: 392, 1967.
- 7 Thoma's Oral Pathology, Vol 1, Ed 6. St. Louis, Mosby, 1970, p. 487.



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Reversal of diazepam induced apnea with physostigmine

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Morton Rosenberg, DMD
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Diazepam (Valium®) is a valuable and extremely popular sedative for outpatient dental procedures. Although respiratory arrest after the intravenous administration of diazepam has been reported, these reports usually involve elderly, debilitated patients, patients who had received respiratory depressant drugs along with the diazepam, or patients administered unusually large or rapid injections.¹⁻⁴

We report the case of a healthy, young female patient who experienced apnea following the slow injection of diazepam, 2.5 m.g., which was apparently reversed by physostigmine (Antilirium®).

CASE REPORT

An A.S.A. Class I, healthy 30-year-old woman with no systemic diseases, needing extensive restorative dental procedures and extractions, was referred to Tufts School of Dental Medicine. Her medical history was unremarkable, and physical examination was within normal limits. Because of the patient's anxiety, she was to be sedated with intravenous diazepam. A blood pressure cuff was applied and vital signs recorded: blood pressure was 120/75, heart rate 78, and respiratory frequency 12. An intravenous catheter was placed in the right forearm, through which 5 per cent dextrose in lactated Ringer's solution was administered. The patient was slightly nervous, but alert and co-operative.

Diazepam, 2.5 mg IV, was injected over a one minute period. Immediately the patient began to move her extremities in a wild and random manner. After 30 seconds, body movements ceased and she became unresponsive and apneic. Controlled ventilation was easily accomplished by application of a full face mask with 100 per cent oxygen.

After four minutes of controlled ventilation, with the patient still apneic and unresponsive, it was elected to attempt reversal of the diazepam with physostigmine (Antilirium®). At this time her heart rate was 110 beats per minute, blood pressure 150/90 and the electrocardiograph read sinus tachycardia. Physostigmine, 2 mg. I.V., was given and within seconds the patient began breathing spontaneously, and after approximately another minute opened her eyes.

The patient did not again lapse into an obtunded state or require further drug reversal. She stated that all she could recall was the inability to talk or breathe and thought she was going to die. After that, she had no recall until she opened her eyes following the physostigmine administration. After adequate observation, she was discharged. She returned the following week and refused diazepam sedation. Her dental treatment was completed with nitrous oxide-oxygen sedation and local anaesthesia.

DISCUSSION

Many cases have been reported in which diazepam, a drug considered to be relatively safe, has caused life threatening respiratory arrest.^{5,6} The majority of respiratory complications associated with the intravenous use of diazepam are seemingly most common in elderly and debilitated patients, but there are case reports of healthy patients experiencing apnea from this drug.⁷⁻⁹

Concurrent medical problems such as hypothyroidism may increase sensitivity to diazepam.¹⁰ Other medications can act synergistically with this drug to produce respiratory depression. The potentiating effects of drugs such as the rauwolfia alkaloids, and the narcotics when used in conjunction with diazepam, are well known.^{11,12}

The mechanism by which diazepam produces respiratory depression remains unclear at this time. A number of studies investigating its use in man have shown little respiratory depression from intravenous administration in healthy patients.¹³⁻¹⁵

Injectable diazepam contains 40 per cent propylene glycol as a vehicle. This compound can cause cardiac and respiratory depression. The amount of diazepam necessary to produce respiratory depression in any particular patient varies widely. Apnea has been reported after the slow injection of 2.5 mg intravenously,^{7,16} yet in another report a patient received 200 mg diazepam intravenously over 24 hours without the occurrence of respiratory depression.⁴

It has been suggested that the rate of injection of diazepam might have an effect on patient response and respiratory depression.^{2,17} The package insert for injectable diazepam states that the solution should be injected slowly

at a rate of 1 minute for each 5 mg (1 cc) in order to reduce the possibility of venous thrombosis and phlebitis. A slow rate of injection could also possibly guard against adverse reactions. In our case, the total 2.5 mg. was injected over a period of one full minute. The small dose of diazepam used in our patients suggests that an idiosyncratic reaction is possibly responsible for the apneic episode.

Physostigmine is a reversible inhibitor of acetylcholinesterase, which by inhibiting the destruction of acetylcholine increases the levels of this neurotransmitter in the central nervous system. The tertiary-amine structure of physostigmine enables this drug to cross the blood-brain barrier, thus producing both central and peripheral effects. Neostigmine, a quaternary ammonium anticholinesterase agent, does not cross the blood-brain barrier, and has only peripheral actions accounting for its usefulness in reversing neuromuscular blockage by nondepolarizing muscle relaxants.¹⁸ The resultant accumulation of acetylcholine at neuroreceptor sites leads to an increased cholinergic activity in the brain.

Physostigmine has been used in reversing the central nervous system depression induced by a number of agents with anticholinergic activity, including scopolamine and other belladonna alkaloids, tricyclic antidepressants, and phenothiazines.¹⁹⁻²³ Physostigmine has been administered to depressed patients postoperatively, suggesting the effectiveness of this drug in reversing the depression from the butyrophenones (such as droperidol) and diazepam.

The use of physostigmine as an antidote to the marked depressant effects occasionally seen with diazepam is not a new concept. A large diazepam overdose in a 23-month-old child was successfully treated by the intramuscular administration of physostigmine.²⁴ It has also been shown that the delirium induced by lorazepam (Atavan®), another benzodiazepine, can be successfully reversed by physostigmine.²⁵

Reversal of depression induced by diazepam by the administration of physostigmine has been reported as successful, obviating the need for support in the form of mechanical assistance of ventilation.^{16,24,26}

The mechanism of the possible reversal of diazepam by physostigmine is unclear. Diazepam has no known central anticholinergic effects, thus the reversal of diazepam-induced depression by physostigmine cannot be explained as a reversal of an anticholinergic action. It has been suggested that physostigmine may have the ability to reverse the central depression of various tranquilizers, including those without demonstrable anticholinergic effects like diazepam, by a non-specific analeptic effect.²¹ This would relate to the increased degree of cholinergic activity in the brain due to the inhibition by physostigmine of the enzyme which destroys acetylcholine at neuroreceptor sites.

Problems associated with the use of intravenous physostigmine relate to its strong muscarinic side effects, and include nausea, vomiting, salivation and bradycardia. Heart rate must be monitored closely during the admin-

istration of this drug and atropine should be readily available to reverse these unpleasant effects which may occur in up to 60 per cent of patients who receive physostigmine.²⁷ In order to decrease the incidence of the strong muscarinic effects of physostigmine, some authorities advocate the use of a physostigmine-atropine mixture. Investigation into the use of a physostigmine-atropine mixture to reverse diazepam sedation for outpatient oral surgery has raised some controversy by suggesting that physostigmine in combination with atropine does not have an analeptic effect on the sedation produced by diazepam.²⁸ Critics claim the central effects of atropine could possibly have cancelled the central effect of physostigmine in Garber's study.²⁹⁻³¹ The use of glycopyrrolate, an anticholinergic drug which does not cross the blood brain barrier, has been suggested and is now being investigated.

The narcotic antagonist, naloxone (Narcan®), has been reported to have been effective in reversing the depressant effects of diazepam. In one report, naloxone was used to reverse apnea due to an overdose of ethanol, barbiturates and diazepam.³² A diazepam overdose in a 27-month-old child was successfully treated by the subcutaneous administration of naloxone.³³ The use of naloxone to reverse depression from diazepam has not been well studied and its effectiveness in the reversal of non-narcotic depression remains unclear at this time.

CONCLUSION

Intravenous diazepam is an excellent sedative drug for outpatient dental procedures. Its high therapeutic index and minimal cardiovascular and respiratory side effects have made it an extremely safe drug if used correctly. It appears, however, that in a few rare circumstances diazepam in small doses administered correctly can cause respiratory depression and apnea. This has been reported in healthy as well as compromised patients. The problem seems rare and unpredictable and has been termed an "idiosyncratic reaction".

The possible occurrence of respiratory depression, although infrequent, requires the dentist using diazepam to be able to diagnose and treat respiratory depression and apnea. The practitioner employing intravenous diazepam should have the equipment and training to administer oxygen under positive pressure as well as correctly monitoring the respiratory status of his patient. Should physostigmine be used to reverse respiratory depression, the heart rate should be carefully monitored in order to detect bradycardia.

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REFERENCES

- 1 Catchlove, R.F.H. and Kafer, E.R. The effects of diazepam on respiration in patients with obstructive pulmonary disease. *Anesthesiology* 34:9, 1971.
- 2 Evaskus, D.S. Letter to the Editor: Apnea from improper administration of diazepam. *J Oral Surg* 35:875, 1977.
- 3 Hall, S.C. and Ovassapion, A. Apnea after intravenous diazepam therapy. *JAMA* 238:1052, 1977.
- 4 Barrett, J.S. and Hey, E.B. Jr. Ventricular arrhythmias associated with the use of diazepam for cardioversion. *JAMA* 214:1323, 1970.
- 5 Doughty, A. Unexpected danger of diazepam. *Br Med J* 2:239, 1970.
- 6 Bel, D.S. Dangers of treatment of status epilepticus with diazepam. *Br Med J* 1:159, 1969.
- 7 Braunstein, M.C. Apnea with maintenance of consciousness, following intravenous diazepam. *Anesth Analg* 58:52, 1979.
- 8 Brauning, G. and Ravin, M. Respiratory arrest following intravenous Valium. *Ann Ophth* 6:805, 1974.
- 9 Buskop, J.J., Price, M. and Molnari. Untoward effect of diazepam. *New Engl J Med* 277:316, 1967.
- 10 Masumi, R.A. and Winnacher, J.L. Severe depression of the respiratory center in myxedema. *Am J Med* 36:876, 1964.
- 11 Sadou, M.S., Balaget, R.C. and McGrath, J.M. Effects of chlo-diamepoxide and diazepam on the influence of meperidine on the respiratory response to carbon dioxide. *J New Drugs* 5:121, 1965.
- 12 Cohen, R.B., Finn, H. and Steen, S.M. Effects of diazepam and meperidine alone and in combination on respiratory response to carbon dioxide. *Anesth Analg* 48:353, 1969.
- 13 Driscoll, E.J. et al. Sedation with diazepam. *J Oral Surg* 30:332, 1972.
- 14 Catchlove, R.F. and Kafer, E.R. The effects of diazepam on the ventilatory response to carbon dioxide and on steady state gas exchange. *Anesthesiology* 34:9, 1971.
- 15 Dalen, J.E., Evans, G.L. and Banas, J.G. The hemodynamic and respiratory effects of diazepam. *Anaesthesia* 30:259, 1969.
- 16 Larson, G.F., Hurlbert, B.J. and Wingard, D.W. Physostigmine reversal of diazepam-induced depression. *Anesth Analg* 56:348, 1977.
- 17 Valium Package Insert. Roche Laboratories, Nutley, New Jersey.
- 18 Goodman, L.S. and Gilman, A. The pharmacological basis of therapeutics Ed 5.
- 19 Rosenberg, H. Physostigmine reversal of sedative drugs (letter). *JAMA* 229:1168, 1974.
- 20 Holzgrafe, R.E., Vondrell, J.J. and Mintz, S.M. Reversal of post-operative reactions to scopolamine with physostigmine. *Anesth Analg* 52:921, 1973.
- 21 Bernard, W. Case history number 74: Reversal of phenothiazine-induced coma with physostigmine. *Anesth Analg* 52:938, 1973.
- 22 Slovia, T.L. et al. Physostigmine therapy in acute tricyclic antidepressant poisoning. *Clin Toxicol* 4:451, 1971.
- 23 DuVoisin, R.C. and Katz, R. Reversal of central anticholinergic syndrome in man by physostigmine. *JAMA* 206:1963, 1968.
- 24 Diliberti, J., O'Brien, M.L. and Turner, T. The use of physostigmine as an antidote in accidental diazepam intoxication. *J Pediat* 86:106, 1975.
- 25 Blitt, C.D. and Petty, W.C. Reversal of lorazepam delirium by physostigmine. *Anesth Analg* 54:607, 1975.
- 26 Avant, G.R. et al. Physostigmine reversal of diazepam induced hyponosis: A study of human volunteers. *Ann Intern Med* 91:53, 1979.
- 27 Bidwai, A. et al. Reversal of diazepam-induced postanesthetic somnolence with physostigmine. *Anesthesiology* 51:256, 1979.
- 28 Garber, J.G. et al. Physostigmine-atropine solution fails to reverse diazepam sedation. *Anesth Analg* 59:58, 1980.
- 29 Belkin, J. Letter to the Editor. *Anesth Analg* 59:459, 1980.
- 30 Cuka, D.J. and Edelman, J.D. Atropine in physostigmine reversal of diazepam. Letter to Editor. *Anesth Analg* 59:459, 1980.
- 31 Smith, D.S. et al. Prolonged sedation in the elderly after intraoperative atropine administration. *Anesthesiology* 51:348, 1979.
- 32 Moss, L.M. Naloxone reversal of non-narcotic apnea. *J Am Coll Emer Phys* 1:46, 1973.
- 33 Bell, E.F. The use of naloxone in the treatment of diazepam poisoning. *J Pediat* 87:803, 1975.

Announcements

CANADA

CDA/ODA 1982 National Convention, The Sheraton Centre, Toronto, Ontario, May 9-12, 1982. Contact: Mrs. W.C. Durham, Convention Manager, Ontario Dental Association, 234 St. George Street, Toronto, Ont. M5R 2P2.

February/février

Mount Sinai Hospital in conjunction with the Ontario Society of Endodontists, One Day Seminar on Facial Pain for the Dental Practitioner (special guest lecturer: Dr. Samuel Seltzer, Temple University, Philadelphia), Mount Sinai Hospital, 600 University Ave., Toronto, Ont., February 12, 1982. Contact: Dr. Wayne Pulver, 159 Willowdale Ave., Willowdale, Ont. M2N 4Y7. Phone: (416) 222-9900.

March/mars

Western Canada Dental Society Winter

Convention and Curling Bonspiel, Saskatoon, Saskatchewan, March 11-13, 1982. Contact: Dr. D.C. Johnson, 507, 105 — 21 St. E., Saskatoon, Sask. S7K 0B2.

May/mai

College of Dental Surgeons of British Columbia Convention, Hotel Vancouver, Vancouver, B.C., May 4-7, 1982. Contact: Chairman, Scientific Program Committee, c/o Canadian Public Health Association, 1335 Carling Ave., Suite 210, Ottawa, Ont. K1Z 8N8. Phone: (613) 725-3769.

July/juillet

The Sixth Congress of the International Association of Dentistry for the Handicapped, Harbour Castle Hilton Hotel, Toronto, July 20-25, 1982. Contact: Marvin D. Klotz, 124 Edward St., Toronto, Ont. M5G 1G6.

Venue West Executive Services Ltd., 1704 1200 Alberni Street, Vancouver, B.C. V6E 1A6.

Canadian Academy of Prosthodontics Annual Meeting, Toronto, Ontario, May 7-8, 1982. Contact: Dr. B.M. Jackson, Secretary-Treasurer, 22-22 Water St. S., Kitchener, Ont. M2G 4K4.

Journées Dentaires du Québec, Queen Elizabeth Hotel, Montreal, Quebec, May 23-27, 1982. Contact: Dr. Morton R. Lang, Journées Dentaires du Québec, 801 Sherbrooke Street East, Suite 303, Montreal, Que. H2L 1K7. Tel. (514) 481-0397.

June/juin

XIIth Biennial Conference on Education and Research is scheduled to take place in Halifax, Nova Scotia, June, 1982.

73rd Annual Conference of the Canadian Public Health Association, Explorer Hotel, Yellowknife, Northwest Territories, June 21-24, 1982. Deadline for submitting abstracts is December 31, 1981. For further details contact: Dr. David Martin,

Announcements

International January/janvier

NIH Consensus Development Conference on Defined Diets and Childhood Hyperactivity, Masur Auditorium, Clinical Center (Bldg. 10), National Institutes of Health, Bethesda, Maryland, January 13-15, 1982. Contact: Bettygail Fulcher, Prospect Associates, 11325 Seven Locks Rd., Suite 221, Potomac, Maryland 20854, U.S.A. Phone: (301) 983-0535.

Hawaii Dental Association 79th Annual Scientific Session, Sheraton-Waikiki Hotel, Honolulu, Hawaii, January 24-29, 1982. Contact: Hawaii Dental Association, Exhibits Committee, 1000 Bishop St., Suite 805, Honolulu, Hawaii 96813.

The East Coast District Society Annual Winter Meeting, Fontainebleau Hilton Hotel, Miami Beach, Florida, January 28-30, 1982. Contact: East Coast District Dental Society, 420 South Dixie Highway, Suite 2-E, Coral Gables, FL 33146, U.S.A. Dentists who pre-register by December 1, 1981, will be offered a \$25 discount.

Massachusetts Dental Society, VII Yankee Dental Congress, The Sheraton-Boston Hotel, Hynes Auditorium complex, Boston, Massachusetts, January 14-17, 1982. Contact: Massachusetts Dental Society, 36 Washington St., Wellesley Hills, MA 02181, U.S.A.

Meeting: Kieferorthopadische Fortbildungstagung, Kitzbuhel/Tyrol, Austria, January 24-30, 1982. Contact: Meeting Secretariat, A-6370 Kitzbuhel, Webergasse 17, Austria.

February/février

The Jamaica Dental Association 18th National Convention, Mallards Beach Hyatt Hotel, Ocho Rios, Jamaica, February 14-18, 1982. Contact: Dr. G.C. McDowell, Chairman, Convention Committee, Jamaica Dental Association, P.O. Box 215, Kingston 5, Jamaica, W.I.

14th European Post-Graduate Congress for Dentists, Davos, Switzerland, February 14-27, 1982. Contact: Freier Verband Deutscher Zahnärzte, Rheinallee 55, D-5300 Bonn — Bad Godesberg, Switzerland.

Chicago Dental Society's 117th Midwinter Meeting, Conrad Hilton Hotel, Chicago, February 21-24, 1982. Contact: Chicago Dental Society, 30 North Michigan Ave., Chicago, IL 60602, U.S.A.

Michigan Dental Association Dental Practice Management Seminar, Boyne Highlands

Resort, February 28, 1982. (1st session), March 1 (2nd session), March 2 (3rd session). Contact: Michigan Dental Association, Boyne Seminar Registration, 230 N. Washington Sq., Lansing, MI 48933, U.S.A.

April/avril

Annual Scientific Conference of the Irish Dental Association, Limerick Inn Hotel, Ennis Road, Limerick, Ireland, April 21-25, 1982. Contact: Declan Corcoran, Public Relations Officer, Irish Dental Association, 29 Kenilworth Square, Dublin 6, Ireland.

May/mai

1982 World's Fair, Knoxville, Tennessee, May 1 — October 31, 1982. Contact: Anne Russell, Director of Special Affairs, City of Knoxville, P.O. Box 1631, Knoxville, Tennessee 37901, U.S.A. Phone: (615) 521-2549.

Australian Dental Association, 23rd Dental Congress, Perth, Australia, May 2-7, 1982. Contact: Australian Dental Association, 23rd Dental Congress, P.O. Box 29, Parkville, Victoria, Australia, 3052.

The Dental Association of South Africa, Diamond Jubilee Congress, Durban, South Africa, May 10-14, 1982. Contact: Dr. Helmut Heydt, Executive Secretary, Dental Association of South Africa, Private Bay One, Houghton, 2041, South Africa.

The International Congress of Oral Implantologists World Congress VI for Oral Implantology, Hyatt Regency Hotel, Maui, Hawaii, May 21-23, 1982. Contact: Mr. Clifford J. Kirschner, Executive Director, The International Congress of Oral Implantologists, P.O. Box 2277, Grand Central Station, New York, N.Y. 10163, U.S.A.

June/juin

The 88th Annual Meeting of the American Dental Society of Europe, Park Hotel, Sandefjord, Norway, June 28-July 2, 1982. Contact: Hon. Sec. Dr. Brian J. Parkins, 57 Portland Place, London W1N 3AH, England.

The University of Texas — Applications are being accepted for the Postdoctoral Program, Dental Diagnostic Science at the University of Texas Health Science Center at San Antonio, for the class beginning July 1, 1982. Contact: Office of the Associate Dean for Advanced Educa-

tion, Dental School, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Dr., San Antonio, Texas 78284, U.S.A.

July/juillet

The Pan-Pacific International Symposium on Biomaterials, University of British Columbia, Vancouver, British Columbia, July 28-30, 1982. Papers are invited (closing date April 2, 1982) on biomaterials especially in orthopedic, cardiovascular and dental materials and tissue mechanics. Contact: Dr. R.H. Roydhouse, Secretariat Biomaterials '82, 1704, 1200 Alberni St., Vancouver, B.C. V6E 1A6.

September/septembre

Asociacion Argentina de Ortopedia Funcional de Los Maxilares, 25th Anniversary, Buenos Aires, Argentina, September 19-23, 1982. Contact: Dr. S.A. Gandolfo, Secretario, Asociacion Argentina de Ortopedia Funcional de Los Maxilares, Buenos Aires, Argentina.

October/octobre

Fédération Dentaire Internationale, 70th Annual World Dental Congress, Vienna, Austria, October 11-16, 1982.

November/novembre

British Dental Association — Metropolitan Branch, First International Prosthodontic Symposium, Royal Lancaster Hotel, London, England, November 25-27, 1982. Contact Dr. M. Seymour, Programme Co-ordinator, 22 Devonshire Place, London W1N 1PD, England.

1983-

Fédération Dentaire Internationale, 71st Annual World Dental Congress, Tokyo, Japan, November 14-20, 1983. Contact: Japan Dental Association, 1-20, Kudan-Kita 4-chome, Chiyoda-ku, Tokyo 102, Japan.

Fédération Dentaire Internationale, 72nd Annual World Dental Congress, Helsinki, Finland, August-September, 1984.

Offices and Practices

BRITISH COLUMBIA — For sale: Well established, busy, preventive practice. Two, modern-equipped, restorative plus hygiene operatories. Situated in professional building. Located in Southern B.C. fruit growing area offering hunting, fishing, skiing, etc. Reply to CDA Box Number 2080.

BRITISH COLUMBIA — For sale, busy family practice in small coastal B.C. town. Serious inquiries only need apply. Reply to CDA Box Number 2077.

BRITISH COLUMBIA — Space available for rent in specialist complex in fast growing community on Vancouver Island, British Columbia. Complex has surgeon, internist and pharmacy. Located close to hospital and beautiful Comox Bay. Reply to: M. Zaharko, c/o Comox Pharmacy, Box 1240, Comox, B.C. V9N 3Z0.

BRITISH COLUMBIA — Golden (Skiers Paradise). We are offering a unique opportunity to practise high quality, appreciated dentistry in this beautiful Alpine town 45 miles west of Lake Louise. The reasonable cost of living and exceptional recreation make this area an excellent place to live. An associate to purchase agreement is available. Call for further information: (604) 837-5149.

BRITISH COLUMBIA — Gold River. High gross, high potential practice for sale. Modern four operator office (three operatories equipped). This practice serves a population of over 4,000. Originally established as a satellite practice. Contact: Dr. S. Miller, 500 Nimpkish Drive, P.O. Box 910, Gold River, B.C. V0P 1G0 or phone: (604) 283-7422.

BRITISH COLUMBIA — Powell River. Excellent opportunity to purchase a modern established practice in an area destined for progressive growth. Office is situated in a major shopping centre and has three operatories, two of which are equipped with equipment less than three years old. Powell River is an attractive area with an ideal climate. Help in financing available if necessary. Contact: Dr. P. Martin, phone (604) 485-6286.

BRITISH COLUMBIA — Vancouver. Downtown, restorative practice. Three operatories, central lab, architect designed. Four day work week. Rent \$415 a month. Please reply to CDA Box Number 2075.

BRITISH COLUMBIA — Vancouver. Excellent opportunity for a dentist to establish in Vancouver residential district. Two modern fully equipped operatories. Reply to: #107 — 8584 Granville St., Vancouver, B.C. V6P 4Z2. Phone: (604) 266-8910.

BRITISH COLUMBIA — Downtown Vancouver medical dental building. Single operator office; new equipment; very low overhead. Suitable to work alone or with one auxiliary. Lots of surgery and all other disciplines. Quitting because of ill health. Perfect starter or retirement practice. Phone: (604) 687-7616 (10-3, Monday thru Thursday).

BEAUTIFUL BRITISH COLUMBIA — Practice for sale on Broadway Street, Vancouver. Single operator, possibly two. New equipment; low overhead. Suitable to work alone or with one auxiliary. Lots of surgery with potential for other disciplines. G.A. facilities next door. Moving to Fraser Valley. Perfect for starter or retirement practice. Phone: (604) 873-5717.

ALBERTA — Calgary. Family practice for sale in expanding suburb area. Two fully equipped operatories, third plumbed and wired. Will consider period of associateship before purchase, and willing to finance. Phone: (403) 262-3826 (business) or 238-3600 (residence).

ALBERTA — Calgary. Well established general practice for sale, excellent N.W. location. Free parking. Office on future L.R.T. route. Reply to CDA Box Number 2073.

ALBERTA — Edmonton. For sale: Long established downtown practice of two associated dentists. Retiring but willing to stay for transition period. Perfectly located professional building with new leasehold improvements, six operatories, four fully equipped. Sharing reception and working areas with two younger dentists. Reply to CDA Box Number 2085.

ALBERTA — Pincher Creek. Practice for sale. Owner wishes to return to school. Opportunity for one or two dentists. Any combination of practice, building, equipment etc. offered. Very reasonable terms. Phone: (403) 627-3290.

SASKATCHEWAN — Saskatoon. General practice for sale. Located in downtown Saskatoon. Two operatories, one has a modern chair and cabinets. Practice orientated on cash basis. Very reasonable. Owner wishes to retire. Reply to CDA Box Number 2089.

MANITOBA — Office space available in brand new building, two years old. Four rooms available in total. One room completely equipped, i.e. unit, cabinets, Vacudent chair, Pelton & Crane light, fiber optic handpiece, Kavo slowspeed. Second room equipped with unit, cabinets, fiber optic, Kavo slowspeed. Fully equipped lab (autoclave, ultrasonic cleaner etc.) also part of package. Equipment can be leased at very reasonable terms with option to buy, or can be bought outright. Please phone: (204) 667-8382 between 9 a.m. and 5 p.m. or (204) 452-1094 evenings.

MANITOBA — Winnipeg. Modern family practice for sale. Two well equipped operatories, two other rooms serviced for future development. Situated in expanding community. Reply to CDA Box Number 2087.

ONTARIO — Mississauga. Residence and practice. Established practice in modern house; three bedrooms and three full baths. Outstanding corner location. Separate entrance and office on ground floor. Completely equipped operator with P & C and N₂O. Second operator plumbed. Excellent opportunity. Reply to CDA Box Number 2088.

EASTERN ONTARIO — Near Quebec border. Well established family practice for sale. Excellent location with modern equipment and facilities. Suitable for one or two practitioners. Good gross and net. Call in confidence: Roi Management Inc., Ottawa (613) 749-1652 or Mississauga (416) 278-4145.

QUÉBEC — Cabinet Dentaire A Vendre. Clinique moderne à Montréal, Plaza Côte-des-Neiges. Service de secrétariat Mardan. Deux salles opératoires, système Cox installés, deux Héliodont Siemens. Deux autres salles avec plomberie finie. Laboratoire. Stationnement et autres avantages. Contactez le Dr. Alexandre Cernica, (514) 733-0173.

QUEBEC — Available, one complete dental office, to share expenses, in two operator office. New dentist to provide own patients. Arrangements to be discussed. Common waiting room. Contact: 5450 Cote des Neiges, Suite 302, Montreal, Que. H3T 1Y6.

QUÉBEC — Hull. Cabinet dentaire à vendre. Bureau neuf très moderne. Propriété en association. Clientèle exceptionnelle. Trois salles opératoires complètes. Deux salles d'hygiéniste. Chirurgien buccal sur les lieux. Dentiste doit quitter sa pratique pour raison de santé après 14 années. Tél.: (819) 568-1827.

AUSTRALIA — Perth. Established Restorative practice for sale, including all equipment for two surgeries and laboratory. Situated in South Perth, two minutes from the city, the office (practice)/residence has parkland and river views. The owner prefers to sell practice and building as one unit but will consider separating. For full particulars write: Robert Heady, 13 Richardson Street, South Perth 6151, Western Australia — Telephone (09) 367 4781.

Associateship Available

NORTHWEST TERRITORIES — Hay River. Associate required to join practice in Hay River approx. September 1982. Extensive travel throughout Central Artic. Enquiries to: Dr. J.W. Tennant, Box 1570, Hay River, N.W.T.

BRITISH COLUMBIA — We are looking for an associate to join our busy family practice in picturesque Revelstoke, British Columbia. Our established group offers a unique opportunity to practise high quality dentistry in a low stress environment. For information please call collect (604) 837-5149

BRITISH COLUMBIA — Chilliwack. Associate wanted for busy preventive-restorative practice. One hour east of Vancouver in the beautiful Fraser Valley. Area offers skiing, hiking, boating, and a mild climate. Contact: Dr. Michael Thomas 102-219 Hodgins Ave., Chilliwack, B.C. V2P 1P2. Office (604) 792-0021, residence (604) 795-9818.

NORTHERN MANITOBA — Associate wanted. Very busy, modern family practice needs an associate. Three Cox units, one Ritter Commander II and one mobile cart. Large operatories. Opportunity to become partners or buy practice. Reply to CDA Box Number 2082.

Marketplace

MANITOBA — Wanted: Associate in family practice. Busy northern city, pleasant working conditions. Generous remuneration. For further details contact: Dr. P.A. Sheehan, 17-18 Westwood Shopping Centre, Thompson, Man. R8N 0C6. Phone: (204) 677-4526 (business) or 677-3926 (residence).

ONTARIO — Associateship available in well equipped, busy, general and preventive practice in Northern Ontario town of 12,000. Excellent recreational facilities and good access to Southern Ontario including scheduled air service. Phone: (705) 335-3633 or 335-4220 (home).

ONTARIO — Oral maxillofacial surgeon, associate wanted in Toronto, leading to partnership. Please reply to CDA Box Number 2076.

ONTARIO — Ottawa. Bilingual associate wanted to work with team of five (one dentist and four auxiliaries) in suburb of Ottawa. Three year old practice with good patient flow, good recall system, very attractive working hours (a three day week-end every week), nice staff and an atmosphere of re-education for quality dentistry in all phases of the profession. The salary is excellent. All applications to: Associateship, 223 Echo Drive, Ottawa, Ont. K1S 1N2. Associateship begins December 1, 1981.

ASSOCIATE WANTED — to manage new satellite general practice. Established practices can maintain high gross while new practice develops. Reply to CDA Box Number 2084.

ORAL AND MAXILLOFACIAL SURGEON. Immediate position available. Progressive, large, established practice involving all phases of oral surgery including outpatient anesthesia and orthognathic surgery. Association leading to possible partnership. Major metropolitan area. Salary commensurate with training and experience in range from \$50,000 to \$100,000 first year. Terrific opportunity for right individual. Reply to CDA Box Number 2071.

Opportunities Available

BRITISH COLUMBIA — Duncan. Locum required for one year as of July 1, 1982. Modern centrally located office, four operatories fully equipped, auxiliary staff (including hygienist). Preventive oriented busy practice. Also included (if required) furnished four bedroom home, two blocks from office. Terms to be discussed. Contact by phone: (604) 746-4014 or write to: Dr. Eric Qualley, 301 Festubert St., Duncan, B.C. V9L 3T1.

BRITISH COLUMBIA — Vancouver. Pedodontist needed in busy specialty practice. Full time position, available immediately. Please write to CDA Box Number 2083.

UNIVERSITY OF SASKATCHEWAN — College of Dentistry. A position exists in the College of Dentistry, University of Saskatchewan, for a full-time faculty member in the Department of Restorative and Prosthetic Dentistry. Graduate qualifications at the Masters level and certification in Restorative or Fixed Prosthodontics preferred. Duties include clinical teaching in restorative dentistry and occlusion concepts to undergraduates and dental residents, service, and sharing departmental and College administrative duties. There is ample opportunity for research and continuing education participation. Depending on experience and academic background, applicants may wish to be considered for Head (Chairman) of the department which includes the disciplines of operative dentistry, biomaterials science, occlusion, endodontics, fixed and removable prosthodontics. Consulting and practice privileges to a maximum of two half days/week are permitted. An Intramural Practice Unit is provided for faculty who wish to utilize on-base facilities. Interested applicants should send Curriculum Vitae and related documentation with at least three names of reference purposes to: Dean E.R. Ambrose, College of Dentistry, University of Saskatchewan, Saskatoon, Sask. S7N 0W0.

MANITOBA — Winnipeg. Oral surgeon certified to practise in Manitoba required for a busy practice. Object partnership. Please submit qualifications and curriculum vitae and recent photo to CDA Box Number 2086.

Miscellaneous

Heli Skiing — Dental Seminar in Western Canada. Call: (604) 837-5149.

AVAILABLE FOR SALE — Absolutely new (three year used). Blue dental unit, Midwest American, model 210 (plus complete tray set up for 210). Complete automatic Stern-Weber chair, blue Castle light. Beige Siemen's X-ray unit adapted onto 210. Bargain for quick sale. Package total value \$25,000 bargain priced \$9,500 cash. Contact: 5450 Cote des Neiges, Suite 302, Montreal, Que. H3T 1Y6. Phone: (514) 342-1742.

AMALGAM — 100 oz. Aristaloy CR Powder by Engelhard-Baker Dental — \$4,000. Contact: Dr. Clyde Covit, 550 Decarie Blvd., Suite 200, Montreal, Que. H4L 3K9. Phone: (514) 747-3565.

CDA Retirement Savings Plan

Unit values of the Canadian Dental Association's Retirement Savings Plan stood as follows on October 31, 1981.

<i>Common Stock Fund</i>	\$49.9292
<i>Fixed Income Fund</i>	\$24.4424
<i>Guaranteed Fund</i>	\$21.4612
<i>Balanced Fund</i>	\$11.6586

Total assets (market value) of the plan were \$30,224,716.

The previous month's figures, as of September 30,

1981, stood as follows:

<i>Common Stock Fund</i>	\$48.7606
<i>Fixed Income Fund</i>	\$22.8246
<i>Guaranteed Fund</i>	\$21.1725
<i>Balanced Fund</i>	\$11.2310

Total assets (market value) of the plan were \$29,832,661.

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